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MINNESOTA
COURSE OF STUDY
FOR
ELEMENTARY SCHOOLS
AND
MANUAL FOR TEACHERS



Prepared by
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AUTHOR'S PREFACE

For a long time, workers in the field of elementary education in Minnesota felt the need of a state course of study. About twelve years ago the superintendent of public instruction, Mr. J. W. Olsen, had prepared and published an elementary course of study. This proved most valuable, but, during 1913, a committee, authorized by the Minnesota Educational Association, prepared a report (Bulletin No. 51) which dealt largely with the elimination of subject-matter, and pointed out the need of a revised study course to serve alike city, village, and rural schools. This very general need of a revised and enlarged course of study for elementary schools was unanimously recognized by state and local school supervisors.

In consideration of these facts, in the fall of 1915, Mr. C. G. Schulz, State Superintendent of Education, laid plans for the preparation of such a course.

Although the mechanical work on the book occupied but a year, it was really "in the making" a much longer period, for it embodies not only the experience of the author, but that of the many teachers and students of education who generously helped to make the work what it is. To all of these the author acknowledges her debt and tenders her gratitude.

With the increased responsibilities thrown upon the schools because of changing social conditions, teachers have, today, not only to be better *prepared to begin* their work, but they must, more than ever before, *keep growing* professionally.

One means of such growth is a course of study, broad enough in outlook, to bear repeated readings with fresh interpretations at each forward step in the reader's professional progress. The hope that this course might prove such an one is in part realized, for, during the past few months, those who have most persistently studied the course speak of what they "*continue to discover*" in it. That the hope may be completely realized, and that the Minnesota Course of Study may be a definite factor in the growth of many teachers is the wish of its author.

THEDA GILDEMEISTER.

WINONA, MINN., March, 1918.

PUBLISHERS' PREFACE

The facts that earnest teachers have found the Minnesota Course of Study increasingly valuable with use, and that in its one short year of life, with no advertising of any kind, it has been called for by teachers and school officers in over half of the states in our Union as well as in Canada, give sufficient proof that it is possessed of more than local value. Indeed, from all quarters of the United States, there has come a general expression of approval of the following features:

- Its evident freshness, or departure from the stereotyped course of study;
- Its clear statement of a basic philosophy of education;
- Its emphasis on the unity of all school work;
- Its recognition and use of stages of human development in the selection and distribution of subject-matter, so as to secure correlation within a grade, and cumulative results throughout the grades;
- Its possible use with any good text-book, and with any group of children;
- Its definite help to beginning teachers in such matters as: Preparation for the First Day of School, Discipline, Program Making, Alternation of Subjects or Classes, and Type Lesson Plans; and
- Its opportunities for initiative on the part of the experienced teacher, as, for example, in the way certain subjects are outlined in detail in grades where they are begun or need special emphasis, but are left for the teacher to outline in other grades.

The first edition of the Minnesota Course of Study was published by the State Department of Education, and distributed, without charge, to the schools of Minnesota. Many teachers wished to own copies, but the state could not, by law, sell any. Nor could the state supply the calls from teachers outside the state. Hence a small sales edition, with which the State Department had no connection, was issued, and soon exhausted. Permission was then obtained from the state and the author to publish this second edition, for distribution in other states, as well as in Minnesota, where it may be used as:

- An authorized course of study in states having none;
- A supplementary course of study in states having their own prescribed courses;
- A Teachers' Reading Circle book; and
- A text-book in Normal Schools, County Training Schools, High School Training Departments, and summer Institutes. In all these places, it has already proved valuable as a Pedagogy or General Methods book in its treatment of aims, materials, and methods of education; and as a text in Special Methods for primary, intermediate, and grammar grade, as well as for rural, courses, by choosing the material suited to each. It has also been used by many departmental teachers in Normal schools, in connection with their "Method" courses.

The selection and distribution of the subject-matter found in this Course of Study are based on such universal laws of education, that teachers in other states than Minnesota will find only a few places where local references must be translated into those of their own states. The book is usable wherever the English tongue is spoken.

Except for a few corrections the text and paging are identical with those of the first edition. This was done so that teachers who already own copies could use the *Diagram* (or summary) and *Index*, two valuable additions found in the second edition, without necessarily buying a new book.

March, 1918.

JONES & KROEGER Co., Publishers.

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A Teacher's Pledge

Recognizing that only the freedom and uplifting power of a cultured mind will make my teaching vital and inspiring instead of cramped and unilluminated;

Realizing that long after the facts, rules, methods, and lessons, are forgotten by my pupils, the heart relations which spring from a cultivated personality will remain the real teaching power for all the days to come;

Knowing full well that the measure of the growth which shall result when my life touches the pupil's life will be the measure of my growing manhood, nurtured by open-mindedness, candor, generosity, interest in things that are right and beautiful, and the charm that makes a gentleman;

Recognizing that my calling is of such a character that I shall have to make a special effort, by plans and all forethought, to counteract the tendency toward an arrested and delayed development, so noticeable in all men, so dangerous in all callings, but so imminent and subtle in my own;

Recognizing in general that my work as a teacher is of the highest value to the state and society for their perpetuation and happiness, and that my influence, exerted upon the imitative plastic lives of children for their weal or woe, must find its source in the culture of my own mind and heart; I enter upon the fulfillment of this solemn promise:

I promise consciously to strive to measure up to the best of which I am able, so to employ my time and talents that my horizon shall be enlarged, that my character shall be enriched, and that I shall follow the gleam.

I promise as a result of well-planned efforts, to be a bigger, broader person, with more interests, with wider sympathies, finer sensibilities, and the capacity for greater helpfulness, in one year from today than I am at this moment.

Should I fail to keep this pledge in full good faith and with reasonably satisfactory success, I then promise to quit the work of teaching, to get where my responsibilities are not so great, and thus permit my shortcomings to fall upon my own life alone rather than upon the lives of boys and girls whose potentialities for growth would be blighted by my arrested development.

G. E. MAXWELL.

PART I.

COURSE OF STUDY.

PURPOSE OF THIS COURSE OF STUDY.

When a man attacks a problem in an effective way he either deliberately or unconsciously employs certain universal and well-known methods of procedure: (1) He sees his problem, either in a general way or in a specific way; (2) after recognizing or setting himself his problem, he selects the methods or means for solving it; (3) having done this, he sticks to the problem until it is solved; then he (4) checks results, or tests his solution; and (5) he applies his newly acquired knowledge to fresh situations, profiting by both successes and failures.

Teaching is a series of just such problems, demanding on the teacher's part, (1) a knowledge of aims, (2) of materials and methods to realize the aims, (3) a personality that can use materials and methods effectively, (4) standards for measuring results, and (5) ability to profit by successes and failures.

Aims—Since aims of education are a direct outgrowth of group life, the teacher should, if he would understand the specific aims of his community, know the general historical and philosophical development of all aims.

When patrons, children now in school, and persons who left school early, are questioned on what they wanted the school to accomplish, the remarkable agreement in aims is worthy of note. They want the school to help its pupils "know more," "earn a better living," learn "how to live," "how to enjoy life," how to "meet difficulties" or "meet emergencies," "get along in all kinds of places," "be proud of themselves," "hold up their heads anywhere," be "brave," be "honest," know "how to work," learn "how to study," and so on, through a long series of replies. That is, patrons want, as Dr. O'Shea has in substance said, that the pupil should be able to adjust himself to the world in which he lives; that he should, first, understand life about him; second, should have habits of industry and thought to aid him in controlling his adjustments; and, third, must have sufficient will power to succeed.

Materials—What materials shall be used to meet these aims are not so readily agreed upon. Some want only “the three R’s”; others want more hand-work than anything else; others demand what they call “cultural” subjects. Consequently, every bit of subject-matter (or other material of education) should have a strong defense for its use, and one function of a state course of study is to show all who are interested the principles upon which the selection of subject-matter is based—subject-matter, however, considered always as a tool, not as an end in itself.

Methods—Though the persons questioned have definite ideas of what education should aim to accomplish, and strong prejudices for certain materials which they desire used, they ordinarily concern themselves very little with the methods to be employed in making the materials further the aim. Therefore it is that the study of methods, though so vitally related to the efficient realization of educational aims, becomes the more exclusive problem of the teacher.

Measuring Results—The public does concern itself with results, which it is quite inclined to criticise adversely, but not scientifically. It therefore behooves the educator to make scientific tests which either refute or support the criticisms, and hence lead either to greater loyalty on the part of citizens or to reforms on the part of the school.

Personality—Because of the short tenure of office of the majority of teachers, and the consequent necessity of employing so many inexperienced persons, who, for the sake of the children in their charge, must be made quickly (even if narrowly) efficient, a grouping of teachers into two main classes, the supervised and the supervisors, becomes necessary. And since, to secure, from young teachers, practical or immediate efficiency, supervisors must plan the materials, indicate the methods to be employed, and often administer the tests of results, there is constant danger that teaching may become too formal or vocational. To counteract this tendency, a course of study and manual on which teachers may *daily reflect*, should stress aims, principles, and theories, so that, just as rapidly as possible, individual teachers may take the initiative in lines which have earlier necessarily been prescribed, thus entering into the profession versus the vocation of teaching.

That is, to be helpful, a state course of study should point the way very plainly for at least a short distance to the inexperienced teacher, but should also suggest either interesting by-paths, enriching detours, or emergency short-cuts, to teachers of wider experience, helping them to see constant opportunities to exercise

individuality and to grow in efficiency. The actual distribution of subject-matter, found in Part I, will be of primary interest to the novice, whereas the underlying principles of this selection and distribution, together with discussions of methods of work and means of measuring results, will be what teachers of experience are likely to care for. (Found mainly in Part II.)

SCHOOL SUBJECT-MATTER AND ITS DISTRIBUTION BY GRADES.

I.—ENGLISH.

A.—INTERRELATION OF THE LANGUAGE ARTS.

The formation of a group, whether it be primitive or modern, whether small or great in number, demands at once some common means of communication. In primitive groups this was necessary for simple self-preservation—the securing of food, the planning of the hunt, and similar things. In higher civilized life, though we need communication for our material needs, we covet it still more for exchange of the spiritual things of life—ideals, emotions, appreciations, and knowledge.

Because communication always has been needed, is sought today, and, so far as we have vision to see the future, always will be coveted, the defense for teaching the language arts in school is very strong.

For direct communication with one another we need gesture, facial expression, intonation, *oral language itself* (in our land, English), and all the accompaniments of speech which refined persons use. As we cultivate our powers of direct communication we find a need for grammar and rhetoric—at least enough to make our speech clear and coherent, if not interesting and persuasive.

For communication with persons at a distance from us, in either space or time, or even for recording events that interest us or that we wish to recall, we need *written language*. So, if we would have our thoughts clear, we must conquer penmanship, spelling, forms of punctuation and of sentence structure, the methods of making paragraphs, and of writing descriptions, explanations, expositions, and, possibly, arguments or persuasions. This means still more knowledge of vocabulary, of grammatical structure, and of rhetorical choice.

For knowing what others wish to communicate to us we must learn (silently) to *read* written speech, whether in hand-writing or print. This power necessitates our having a working knowledge (the art, not the science) of pronunciation, and, hence, of phonics; of spelling; of grammatical structure of sentence, clause, and phrase, and discrimination in vocabulary. These, plus all the above-named elements of good oral expression, are needed if we wish to communicate, in the author's words, what we have gathered—that is, read aloud to others.

Oral language is well started before the child comes to school, and so becomes the basis of further language acquisition. The complex activities attendant upon *written language* necessitate its very gradual introduction; but the not-very-difficult art of reading what interests him makes *reading* the desire of every five- or six-year-old child. With advancing years and the application of the reading art to the interpretation of literature and to all study work, the subject ceases to be a simple art, and becomes, first, a science with its own technique, and, later, a fine art.

To summarize a discussion transferred to Part II:

- I. The child needs to understand others, hence, *listens*—
A. Involuntarily. B. Voluntarily.
- II. The child wants others to understand him, hence, *communicates*—
A. By signs and sounds. B. By speech.
- III. The child revels in speech for its own sake, not to communicate; hence he talks merely to enjoy sounds. (The period of greatest *vocabulary acquisition*.)
- IV. The child wants to see what others find in books, hence, learns to *read*.
- V. The child wants to put his ideas and communications into permanent form, hence, learns to *write*.

Constant interrelation of listening, talking, reading, thinking, interpreting, and writing, is to be preferred to any separate development of the different language phases. Temporarily one may receive emphasis, but should not far out-run the others, nor for any period of time.

(See pp. 228-230 for the elaboration of this brief outline.)

B.—LANGUAGE.

Here the three phases, *Listening*, *Talking*, and *Writing*, will be emphasized, and will appear in every grade; *Grammar* will be added in eighth grade only.

Listening, at first involuntary, becomes voluntary as the power of attention is trained. From giving voluntary attention for very short periods in the first grade, pupils grow in power to attend for longer and longer periods. Teachers should make sure that children are gaining in ability to attend, for this power is the basis of will, and a controlled will is the foundation of character (highest

self-realization). If pupils cannot attend for long periods, it is decidedly better to change the work, having concentrated attention for five minutes, rather than to encourage dawdling and inefficiency by having desultory attention for a half hour. Pupils should be tested on their attention by questions on the story or the recitation; for example, when one child has finished a recitation, the teacher may ask: How many points did he make? What were they? What was one? or, Do you agree with what he said? (Yes.) What *did* he say? or, What was his second statement? These tests should be continued until pupils feel a need of attending carefully to what is done. (All this is direct training for adulthood. Individuals must get the correct statements made by friends and by public speakers, or truth cannot prevail.)

About the same means will be used to train the listening ability throughout the grades, the differences being in the amount of attention and the specific materials used for the center of attention. These are, in general, the speech of the home; the words and accompanying intonations gathered with whatever experiences are being met, both inside and outside of school; the teacher's directions about the work of the room and about play at intermissions; conversation and recitations of companions; stories or poems read and told by the teacher or by visitors. The teacher of every grade must take pains to use good English, to articulate clearly, pronounce correctly, and give clear-cut directions. He must learn to select and to tell stories well, and to read interpretatively to the children, by these means increasing the pupils' power to attend, to recognize thoughts, and to gather vocabulary. He must give to that vocabulary clear and broad meanings by occasional explanations and illustrations of the thought, and by free and natural use of suitable facial expression and gesture as he reads or talks. The values to be gained from the verbatim reciting of good poetry suited to the grade being taught are well known to all; the teacher must therefore have at his tongue's end many a poem to be so used in an odd minute or two. (See pp. 91-93, Minnesota School Library List, 1915-16, for reference-books.)

Talking.—Adults, as well as children, talk so much more than they write, and their culture or lack of it is so often judged by the English they speak, that the ability to speak well becomes a prime aim of every elementary-school curriculum. To speak well one must have something to say and then say it so others are glad to listen; that is, (1) fluently, with good vocabulary, easily commanded; (2) coherently, well organized, so as to be followed if attention is given; (3) accurately, using correct vocabulary, acceptable grammar,

and even choice diction. If, in addition to these minimum essentials of good talking, the speaker possesses animation, interest in his topic, originality in expression, a sense of humor where necessary, and convincingness, we are not only glad to listen, but we covet the privilege, seeking to hear him whenever possible.

Freedom, ease, or fluency, the essential which primary teachers can cultivate, must not be lost with advancing years, though intermediate-grade teachers work for coherency, and grammar-grade teachers add accuracy and polish to the list.

Children differ widely, from the most voluble child, who would usurp all the time, to the most passive child, who never volunteers, and who, when directed to speak, can scarcely be heard. The teacher's resourcefulness becomes exercised to the limit in his attempt to curb the one and urge forward the other without making either one self-conscious. The direction, "Tell me one thing (later, two, three, etc., things) that you did on Saturday," keeps the too-talkative child within bounds and yet does not demand too much of the most timid one. "Tell me the most interesting thing that you saw on our trip, or found out yesterday," directs the impulsive child towards organization of ideas and gives him food for thought while the slower child is getting out a single sentence about *anything* which *he* saw.

Vocabulary is especially helped by pupils' reproducing stories heard, with the idea of telling the stories so that others are glad to listen. Commendations upon clearness of tone, looking at the audience, choice of words, making the pictures clear, etc., whenever such commendation is deserved, will soon set standards for the pupils as to what makes a talk good. Pupils may then help to find the good points in each recitation that is made, until, in upper grades, they have gained a standard which they can use for self criticism and improvement. In no grade should the recognized standards of "good work" be beyond the attainment of the pupils, but should always be just enough above the average of the class to act as a spur to self-improvement.

Children in every grade will need drill in the repetition of correct forms, and for this purpose nothing more valuable has been found than the language games now so well known and so easily varied by every resourceful teacher to meet his school's needs. (See p. 302 for references.) Every teacher should make a complete list of the English errors spoken or written by pupils of his grade, and then steadily work to eradicate them in the order of their seriousness.

Above all else, the teacher must watch that standards set and corrections made do not produce self-consciousness and fear of self-expression on the part of pupils.

Recent studies made of children's English errors prove that the different kinds of errors are not so numerous as was once supposed, and that persistent effort throughout the grades can eradicate virtually all of the gross errors in speech.*

Writing.—Writing one's thoughts, compared to speaking them, has a relatively small place in the lives of most individuals; yet written language is needed often enough to warrant its receiving considerable attention in school. Dr. Rice's investigations led him to conclude that "almost every pupil is capable of acquiring the art of writing good English, and that the normal child is not to blame if he has not acquired the power of expressing his thoughts in creditable English"† by the end of the eighth grade.

In written English, as in oral, tests have been made in many sections of the United States. The results show that concentrated effort on a comparatively few points in sentence and paragraph structure, and in the mechanics of penmanship, spelling, and punctuation, should produce exactly the result Dr. Rice concludes to be possible.

Each teacher should study with great care the work of all the grades both above and below his own, know what to expect, build upon that knowledge, work for cumulative effect, and steadily raise the standard in both what is selected to be told (orally or in writing) and the manner of expressing that thought.

A certain amount of repetition seems necessary for emphasis; but, wherever possible, it is taken for granted that teachers will read what was suggested in the grades preceding theirs.

GRADE I.

Listening to speech of companions and teacher, and especially to stories and poems. Only the best literature should be used, since the time in school is too short to be spent upon stories or anecdotes that are merely "not bad." Every minute is necessary for the positively excellent literature which will be needed by pupils as they advance in the grades and reach adulthood. Literature of the primary grades is absolutely necessary to the appreciation of literature in high school and college, and he who hasn't the background of Mother Goose Rhymes, fairy tales, myths, and legends, to help him understand references and allusions made in adult

* See W. W. Charters's study, in University of Missouri Bulletin, Vol. 16, No. 2.

† Scientific Management in Education, p. 185.

literature, often misses or at any rate is delayed in his appreciation of the real point. Besides this background for the appreciation of other literature, primary literature gives pupils gathered from homes of widely differing standards, a common basis for conversation about something worth while. Unlike a personal incident, a bit of good literature can be told by every member of a school and yet not pall; the vocabulary is choice, and the mental pictures aroused are stimulating to imagination and to thought; the organization is good and the development orderly; so that, withal, the children get from good literature ideal models for imitation.

Children of this age are especially fond of rhythm, and so like simple rhythmic tales, cumulative tales (which are rhythmic in their repetitions), and rhymes. They also love fairy tales, and stories about themselves and their companions. (See p. x, pp. 2-7, pp. 91-93, etc., of the Minnesota School Library List, 1915-16, for suggestions for real literature.) The teacher can satisfy children's love of stories about themselves through the telling of pretended incidents, such as a trip to the moon, or by relating "play" dreams which the children have when they put heads on desks and pretend to sleep a few seconds. Of course the teacher has to tell the first "dream" and at intervals thereafter must tell parts of her "dreams," to prevent children from getting into a rut. "Dreams" are especially good because they may be as fantastic as one pleases and still be no more strange than real dreams often are. As a dream, this story, told by Edward L., a first-grade child, isn't so funny as it sounds.

"I dreamed that James and I went out to the woods. There we saw a couple of Indians. We lifted our air rifles and fired. James shot two and I shot three of them."

Things that start out large suddenly grow small, and without even any "abracadabra," such as "The Little Lame Prince" had to use, one is transported miles in a second of time. The teacher may well get suggestions for her "dreams" from the above-named book, as well as from "Alice's Adventures in Wonderland," "Through the Looking Glass," and "Pinocchio," though these books mustn't be spoiled for later reading.

The stories prepared for telling should either be brief, with a main thought kept prominent, or should be composed, as are cumulative and fairy tales, of distinct thoughts so related as to be readily held in mind. Children can then be held, in their reproductions, to saying something worth while—not just chattering; to gaining in the use of complete sentences; and to making clear pictures.

Talking.—In the first grade, freedom or spontaneity in expression should be the main thing sought. This is produced by having pupils talk about the things of most vital interest or best known to them; namely, their own experiences at home, in going to and from school, in school, or on the play-ground; their experiences in helping mother, or taking a walk or ride with father; what happens to their pets; what they do with their toys; eventful days such as birthdays, Thanksgiving, and Christmas; school work in which all are interested, nature observations, games, school excursions, pictures studied, and stories heard or learned in the reading-class; things imagined or desired as experiences; memorized poems.

Here, as in upper grades, the speaker must have an appreciative audience, and the teacher must each time give the listening pupils a motive for attending, or both speaker and audience lose the values of the language exercise. A few motives are suggested to show beginning teachers for what the children should be looking; resourceful teachers will very soon find other and better suggestions. In all cases the suggestions should be helpful to the speaker, not the sort to cause fear or self-consciousness.

Show Mary that you want to hear her part of the story; that you like this story; that you are glad to hear it again; while you listen to John, see whether he makes the picture clear to you; listen to see whether you hear every word; be ready to go on with the story, not repeating a thing Jane said; be able to tell me how many and what things happened in the part Lucy tells; be ready to help Susie if she needs it; when Sam is through let us tell him whether he did better than last time; think of all the things you like about the way Bert tells his story. If you sit up and listen well, you will be helping Frank to keep a good position; when Guy finishes, you may draw (or cut) the picture he makes, and the better you listen the more you'll get for your picture.

If a pupil hesitates for a word, the teacher or the listeners should unobtrusively supply it. In the same inconspicuous way, the teacher must gently but persistently substitute correct forms for all wrong ones. The important thing is to secure freedom, which too emphatic attention to errors will check. The teacher will, of course, note all errors, and later plan games to give special drills upon those most needed. Some of the commonest errors whose correction should be begun in first grade are: *Seen* for *saw*, *come* for *came*, *done* for *did*, *run* for *ran*, *ain't* for *isn't*, *don't* for *doesn't*. My papa *he* said—, I *got-a* go home—, Once *they wuz* a little boy—, and the over-use of the conjunction *and*. From the first, pupils must be urged to use large movements whenever such prove helpful in their talking. They may show relationships by drawings at the blackboard; by asking some companions to step forward and stand in desired positions; by placing waste-baskets, pointers, or

erasers, wherever necessary; or by indicating objects in the room that might illustrate the meaning. This will help to prove to the teacher that the child's new vocabulary means something to him, and will help other children to secure meanings of words used. Pupils should be urged to use their own words while keeping the true thought of a dialogue, and especially to supply indicated conversation in a dramatization, even when the story does not tell just what was said.

A child inclined to monotony must be urged to imitate the voice and manner of the person characterized. "Was that just the way mother spoke to the baby?" "Do it just as mother did." "Make me feel how mother loved the baby and what she said to quiet her." Or, if relating how father scared away an ugly dog that came towards the baby, the child must be stimulated to "move and speak and use the same tone as father did." Gradually, the monotone will show voice variation.

Writing.—No original composition work in writing is demanded, but much of the seat-work is direct preparation for writing in second grade. For example, discrimination of word forms; matching words with words accompanying pictures; making sentences like patterns from cards containing phrases, words, and (later in the year) letters; and laying corn or pegs on children's written names, or tracing the same with colored crayons. Near the end of the year, copying words, phrases, and sentences, *at the blackboard from blackboard copies, and at the seats from copies on cards*, may be inaugurated; but such copying must not teach bad habits of finger movement or pencil holding, and so must be supervised and given in small quantity.

Penmanship.—Should some special method of penmanship be employed throughout the school system, that will, of course, be followed. If none is used, the teacher will find herself in line with modern thought if she has blackboard practice, to secure full-arm movement, giving pupils, by the end of the year, control over the up-and-down movement and the two ovals. They should also acquire the ability to make legibly but still with free-arm movement all the commonly used letters of the alphabet. Since pupils will not need all the letters often enough to fix their forms in memory, a complete alphabet of both capital and lower-case letters should be either on the blackboard or on a large chart placed within easy sight of all pupils.

Spelling.—Spelling as a separate subject will not appear on the program, but by the end of the year children will be able to write as wholes many words learned through reading and related seat-work.

What may reasonably be expected by the end of the first year.—That the child have something to say; that he stand in good posture and speak in clear, pleasing tones while he talks; that he enunciate distinctly and pronounce correctly; that he indicate his completed thoughts by proper inflection, avoiding the excessive use of “and”; that he show voice variation for at least the larger differences in emotion; that in seat-work the child indicate that he recognizes sentences by the proper placing of capitals and period; that he use a capital for the pronoun *I* and for proper names of persons; that he write his own name and address, with proper spelling and punctuation; that, unless a special penmanship system defers all writing, he write as wholes between fifty and one hundred words common to his various lessons, the list to include such words as *the, and, in, on, was, and is*.

GRADE II.

(See Grade I, as all possible repetition is avoided.)

Listening.—Second-grade pupils should be made more conscious of their listening and shown the benefit it will be to them to keep ears (and eyes) open for things to tell others or for verifying facts already told. They should begin to show power in giving voluntary attention whenever necessary, and to keep their attention upon one thing for a longer time than before. Individuals will of course differ, and no standard can be set for all. In one way, listening attentively can be cultivated by having pupils feel and reproduce rhythms in music.

Having learned how to listen attentively, the pupils may now receive several consecutive directions about their work or play with the expectation that all can be executed. They can hear told a longer story, recalling the early parts even though absorbed in the climax. As said under Grade I, only the best literature should be used for story telling. Besides the literature named in first grade, pupils respond happily to nature, Greek, and Norse myths, and to poems of childhood. (Use the Minnesota Library List constantly.)

Talking.—Effort should be made: to keep alive all the freedom gained in first grade; to enrich vocabulary and secure such easy command of the new words and phrases as to produce pleasing fluency; to hold pupils to a point more consistently; and to arouse the *beginning* of consciousness of digressions. Incidents should be told with more conscious orderliness, such, for example, as a plainly marked beginning or preface (if there is one to the incident), followed by such emphasis upon the principal feature of the event as to make the incident clear to all.

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The demand for good posture, pleasing voice, varied intonation, good articulation, and evidence of knowing thought completeness, must in no wise be remitted.

Pupils should gradually acquire standards for judging whether their own and others' work is good or not. Mere fault-finding is easy, and must not be indulged in; but second-grade pupils need not be made self-conscious by adverse criticism, judicious in amount and sympathetically administered. Given an attentive and sympathetic audience, and having something to tell, a normal child wants to do his best, and therefore willingly accepts all helpful criticism, particularly when he may "try again," putting his correction into practice.

The same sorts of English errors as those noted in first grade will still be found in the second. While keeping up practice upon the correct use of *did*, *saw*, *came*, and *ran*, the teacher may add the past tenses of other verbs needed by her pupils, fixing the correct form through the playing of games which she can easily devise, or adapt from some suggested in the references (p. 302). Children inclined to talk monotonously are helped to portray not only very different emotions (such as love and annoyance—see p. 18), but also a few shades of even one emotion, as, for example, the increasing surprise of the Three Bears on finding fresh evidences of the invasion of their home. (See note, p. 82, for suggestions for inflection drills; also p. 85.)

Writing.—Some written composition is, of course, possible in this year. It must, however, be based upon oral work. The child who has been helped to feel the end of a thought in his oral composition, and to express that completeness by inflection, will naturally tend to write his thoughts in sentences.

"Children do not intuitively possess habits of correct written expression. These must be built up from the day that written language is begun in the second grade. The important thing, and the difficult thing, is to give sufficient drill on the mechanics of written composition, without killing the child's spontaneity and his freedom of expression. Drill on the mechanics of written composition there must be, from the very start. At the same time, the teacher must be extremely cautious not to let her insistence upon correct form kill the child's desire for self-expression. Form must be taught, and in the process content must not be sacrificed. This is a task that calls for all the wisdom and all the ingenuity of the teacher. It is the real test of the good teacher of composition."

The test of whether the written work is good should be an oral one—the child who wrote the story, reading it to the others, who,

as sympathetically helpful listeners, look for: What they like, what is clearest, what they want to know more about, etc. The teacher, who has looked over the composition, proposes each time a motive to the audience that will also help the writer who reads his "theme." As said before, a few adverse criticisms will do no harm—such as, "He used too many *ands*"; "I think it would be better if he left out —"; "I can't tell what he means by —"; but mere flaw picking must be guarded against.

* "The *dictation exercise*, if employed in moderation and with a clear understanding of its use, is valuable in helping to fix habits of written technicalities—spelling, capitals, punctuation, and things of that sort. It performs the same office as abstract work in arithmetic. In the dictation exercise we isolate the forms of language and focus attention entirely upon them. In writing compositions the centre of attention is occupied by the content (the ideas that are coming to the surface for expression), while the technique (the writing, spelling, punctuation, etc.) is, or should be, removed to the margin of consciousness. In the dictation exercise these relative positions are reversed. The content comes to the pupil ready-made; he has to think only of the form. In addition to its value in teaching and testing technicalities, the dictation exercise, if rightly managed, builds up, also, the power of sustained attention and concentration. Its never-failing effect of restoring quiet in a restless class is an everyday evidence of its power to do this. Its value, in developing the power of concentration, however, depends very largely upon the way the teacher handles the exercise. The dictation may be too long; it may be uninteresting to the pupils; it may be dictated poorly—indistinctly, too fast, too slowly, or with repetitions. Dictation is an exercise that requires as much care in preparation and skill in execution as any other kind of written composition. It is utterly useless in the hands of a teacher, who, because she has no other work prepared, decides to give pupils a little dictation. In order to prevent any false notion as to the proper place of dictation work, teachers should bear in mind that it is an exercise which is almost wholly mechanical, and that no amount of dictation alone will make good writers. It is concerned with mechanical correctness alone. It is not of much value as a teaching exercise. Its chief value is in testing, not in teaching. It is not even a safe test of the knowledge of language forms. The proof of a pupil's mastery of the mechanics is not a correctly written dictation lesson, but his habitual observance of these matters

* This and many other quotations are taken from "Speaking and Writing English," by B. M. Sheridan.

in his daily writing. The pupil who begins all the sentences of a dictation paragraph with capitals and ends them with periods, may in his free writing display a gross lack of 'the sentence feeling.' The cadence of the teacher's voice, and the natural pause which follows the close of a dictated sentence, give him the cue as to when a period is required and where a capital must be employed. The same is true in a lesser degree in respect to the other points of technique. Teachers, therefore, will make a mistake if they think they can teach correctness by much use of the dictation exercise. It is a good thing, if rightly used. But it must be used with moderation and with the full knowledge that its chief value is to test the result of the teaching of the mechanics."

"*Copying* is useful, as an occasional exercise, to train pupils in careful observation and exact expression. These are qualities sufficiently rare in grown-up people to suggest the need of some organized effort on the part of the school to develop in children the power to see things straight and to report them straight. It is the experience of the Civil Service examiners that more people fail in the copying test than in any other. The standard of copying in all grades is exactness itself, though the matter presented in the lower grades should, of course, be much shorter and simpler than that which is given to older pupils to copy. The mere act of copying from time to time will not lead anywhere. Children must be *taught right habits of copying*. In the second grade, for example, the pupil should be taught to look at the whole word and then write the whole word, not to copy a letter or two, then look at the word again, and copy two or three more letters. Even in the lower grades, the smallest unit should be the word. As soon after as possible, children should learn to look at the whole sentence, and instead of copying it word for word, looking back each time to the printed page, they should copy a whole phrase at a time."* (See pp. 287-292 for other sorts of seat-work possible to use here.)

Penmanship.—Regular daily practice periods should increase the child's control of movement. If no writing system is named for the school, the teacher may select any one of several excellent systems and follow the usual second-grade plan. The child should seldom need to look at the teacher's copy to see how a letter is made, yet should not be discouraged from doing so. There is no lack of motive for legible penmanship; indeed, the teacher must watch that movement isn't sacrificed by the child's thinking too much of form. Neatness may well be commended, but not good

* Sheridan.

form that has been gained by finger movement. The rate should be about 20 to 30 letters a minute.

To write so that mother can read the story; to make it good enough to be saved for parents' day; to be sure Santa Claus can make out what is wanted; to keep a record of plant growth, or of the sunny days in one month; to write a note to the teacher when she hasn't time to hear all that the child would like to tell her; to keep a record of one's successes in some competitive game; are a few motives worth using.

Spelling.—The Investigation on Spelling made by the University of South Dakota contains, among others, the following conclusions:

"The most useful words in our language, indeed in any language, are the words early learned by children; hence the spelling vocabularies of the lower grades should receive special attention; and this means that there should be fewer words in the spelling assignment and more care in fixing their meaning and use.

"Since no word is immune to misspelling, and each word has to be mastered, our most important problem in handling spelling material is the problem of placing in the hands of our students the list of words useful in their writing at the given time, and making sure that these words are mastered. These lists can never be 'desk made.'

"Since grade students commonly use from 500 to 2,500 words in writing, yet on the average misspell but about fifty words, not one child out of a thousand misspelling as many as one hundred words, our spelling problem is not so gigantic as it is commonly believed to be, for the reason that a handful of words misspelled over and over by each student has misled us in our judgment.

"The words which give most trouble in spelling are found, almost without exception, in the writing vocabularies of the lower grades; and since these troublesome but useful words are not pointed out and effectively dealt with in these early grades, students go on misspelling, year by year, words that should be mastered in the early school years."

Second-grade teachers should list the words needed by their pupils in written work and see that these words are thoroughly taught. They should remember that the writing vocabulary is considerably behind the individual's reading vocabulary, so it is probable that the words found in a good primer or first reader will suit the majority of the class. The following plans have been successfully tried to prevent children's writing words incorrectly, thus fixing wrong forms:

1. Encouraging children to use their text-books as sources for the correct spelling of words they wish to use.

2. Encouraging children to write just the known letters of a word and drawing a line for the unknown part. The teacher can usually tell what word was desired by the context and the initial letter; she supplies the full spelling in colored pencil before returning the paper. The child then copies, into what he calls his "dictionary," (a set of 26 blank leaves, on each of which is a letter of the alphabet, the whole tied into an attractive paper cover,) on the proper alphabet pages, the words he didn't know. The next time he wishes those words he goes to his "dictionary."

3. Preparing hectographed lists of words usually wanted and letting pupils learn how to find the desired word by sounding the initial letter and running down the alphabetical list till found. Not too many words should ever be in any one list. When the most of the class no longer need the first list of, say, twenty words, the teacher may supply new lists (one for each child, and usually mounted on cardboard to prevent loss and musing). The second list may repeat some words of the first list, if they are still needed. The teacher must compose the lists by watching the children's writing needs, not from any book or course of study.

4. Putting on the blackboard the words likely to give trouble, especially the spellings of proper names, whenever all the class are to write upon a common topic which the teacher has developed orally.

5. Combining two or more of these plans, or one of them with other plans easily devised.

What may reasonably be expected by the end of the second year.—All that was expected at the end of the first year (see p. 19). Greater fluency in oral composition. The ability to write legibly with easy arm movement the material needing to be written daily. The ability to spell—that is, write as word-wholes—at least from three to five hundred of the most commonly needed words.* “The majority of the pupils should, if given a subject they feel like writing about, be able to produce three or four sentences with a fair degree of facility, and with no assistance from the teacher except what is derived from the oral preparation. The sentences should show some sense of sequence, and the desire to be interesting. They should be invariably correct in the matter of capitals and ending marks. The pupil's power should always be measured by the first writing, not by a corrected and rewritten copy.”

Probably the minimum of other mechanics to be demanded by the end of the second grade should be: A. Capitals: (1) At the beginning of a sentence; (2) in the pronoun “I”; (3) in writing the child's own name and address; (4) in days of the week which he may have learned (not necessarily all); (5) same with months learned; (6) same with holidays learned; (7) in beginning each line of poetry. B. Final marks: (1) Period at the end of a sentence; (2) period after each abbreviation; (3) question-mark. C. Commas: (1) Only such as are needed in writing the child's own address. D. Abbreviations: (1) Days of the week; (2) months of the year; (3) Mr., Mrs., Dr.

GRADE III.

Listening.—If any person has learned to attend, has the power to profit by new experiences and to find in daily events food for reflection and application to further experiences, his education never ceases, even should schooling be denied him. Listening, then,

* If the teacher hasn't time to make such a list for herself, she may secure, for ten cents, the list from the State University of Vermilion, South Dakota.

is an important habit to acquire, and by the end of the third grade, pupils should have fairly well-fixed habits of listening intelligently. The teacher may hold pupils to outside-of-school observations by questions upon the rhythms of bird-songs heard, things learned on Saturday and Sunday, and by commending children who report on interesting experiences in everyday life.

Vocabulary can be enriched by some discussion of the stories told or read to children, questioning upon the value of certain words used by the author until children recognize that in some places only one word could rightly be chosen. Then they begin to notice words and to use them in their own productions. When some words are particularly well chosen by an author, the teacher may, on the second reading of the story, pause to let some child who can do so supply the words. The third reading, with pauses at the same places as before, will bring the words from half a dozen pupils where only one knew them the first time. A third-grade class who loved Kipling's "Riki Tiki Tavi," begged for its reading time after time. The teacher noted that on the seventh reading whole paragraphs could be given verbatim by many members of the school, and that every child could give at least a score of the most unique or interesting phrases. All this was done with no intention of memorizing on the part of either pupils or teacher. Vocabulary so gathered always shows in children's written work, as could be illustrated by dozens of quotations from their work, did space allow. One instance of the sort, proving that vocabulary acquired with meaning stays, was that of a sixth-grade pupil who fluently used an expression unconsciously learned in third grade, and not used after that time until he said: "In third grade, Miss G—— told us how the Indian hordes came down at midnight on Cocheco town, and how her own great-uncle bore his cruel scalp-mark to fourscore." The only fault was a confusion of relationships, the child not misquoting Whittier.

Children in the third grade seem to be actuated by a growing sense of feeling. This leads to discrimination in values, and to free play of the imagination. The æsthetic sense is strong; words are loved for their imagery, length, rhythm, color-tone, etc.; and "big words," or words full of dignity, humor, sound concordance, etc., are tried constantly. As a consequence, the forms of literature which appeal are those containing (1) humor, like the "Uncle Remus" tales, "Just So Stories," "Letters from a Cat," "Pinocchio," and "Merry Animal Tales"; (2) legends, stories, and poetry, using figurative language; (3) stories true to life, including such stories as "Tree Dwellers" and "Early Cave Men," with tales of

colonial days, and of Indian life. Experienced teachers will find inspiration to renewed effort in Lynn's "A Stepdaughter of the Prairie," a book that, without seeming to teach, is full of suggestions about literature for children. (See also Minnesota Library List for third grade.)

Talking.—With previous training well done, (see grades I and II,) pupils now make rapid strides in freedom and fluency, because of enriched vocabulary. Without detriment to these factors of good talking, children must be drilled upon such errors of English as are likely, if not conquered, to be forever troublesome. It is worth the teacher's time to conquer them here, and to make pupils conscious of what they are learning, though they should not become self-conscious or "afraid to speak." Language games play a most important part, and, as illustration of what may be done, a few are given below.*

Game 1. This game is like a spelling-match. The teacher gives out the following words, one by one:

a bubble	a horn	a kite	a whistle
a potato	a feather	a flag	a picture
a lesson	a riddle	an answer	a ball
a bean-bag	a wagon	a tulip	a leaf

The pupil whose turn it is, should reply instantly, choosing the most fitting answer from the following sentences: I grew it, I threw it, I blew it, I drew it, I flew it, I knew it. It is a failure to hesitate or to give the wrong answer.

Game 2. For another game, the teacher may give out the same words, and the pupil whose turn it is may respond instantly with one of the following questions:

"Have you ever known one?"	"Have you ever flown one?"
"Have you ever blown one?"	"Have you ever thrown one?"
"Have you ever shown one?"	"Have you ever grown one?"

Game 3. Make up a similar one for the class to play, using these words: bought, thought, fought, caught, taught, brought.

Game 4. A similar game may be made, using the following sentences, only there will be no rhyming words in it:

I saw it.	I wore it.	I sang it.	I showed it.
I did it.	I stuck it.	I shook it.	I strung it.
I chose it.	I drove it.	I swung it.	I spun it.
I wrote it.	I ate it.	I rang it.	I hid it.
I broke it.	I took it.	I dug it.	I bit it.
I tore it.	I gave it.	I said it.	I wove it.

Children of this age like the "Goop" stories, as children of a decade ago liked Cox's Brownies, and if a few original rhymes can be invented by the teacher, and printed on a card with some drawings of Goops added, much will be done to correct English errors.

* From p. 22 of "Speaking and Writing," by Maxwell, Johnston, and Barnum.

Children should hold clearer standards as to what is "a good talk," and be ready to help one another improve. To have all attend to the speaker who is telling a story known to all is not easy, but that it can be accomplished has been proved several times.

Standards set for lower grades should be maintained and slightly raised. Since most of our troubles in written composition come from our neglect of oral composition, the lower-grade teachers can scarcely be too rigid in forming right habits in oral work. While breaking up the habit of running sentences together by over use of *and*, *so*, *then*, etc., the children's sentences may become short and jerky; but this is not so bad as the stringing together of only loosely related ideas, since the "choppy sentence" is more easily cured in later grades than is the complete lack of "sentence feeling." "Indistinct utterance, poor sentence structure, grammatical mistakes, a poverty of words, and a lack of anything like fluency," should *not* be said of any children's English when they have finished the elementary grades.

Writing.—"When the pupil comes to put on paper what he has to say, the situation becomes complicated by the entrance of factors which were not present when he was expressing himself orally. He must think about his penmanship. He must watch his spelling. He must look out for his capitals, his punctuation, his indention, and all that. These things become automatic, or nearly so, after years of training and practice; so that educated men and women are required to give little or no thought to their penmanship, spelling, punctuation, and the other technicalities of written expression. But the child is at first obliged to think of all these things all of the time. By degrees, however, with reasonably good instruction and sufficient practice of the right kind, the observance of the simpler requirements of written technique becomes habitual to him, so that by the time the pupil has completed the elementary-school course, he ought to be fairly free from the necessity of giving conscious attention to the mechanics of written language. The few things that are required in the way of written technicalities must be mastered as early as possible in the course, so that these difficulties will not stand too long in the way of the freedom and spontaneity of the child's expression. So long as his attention is distracted from the thought of what he wants to say by thinking of his penmanship, his spelling, his punctuation, and similar matters of written technique, his composition is likely to be formal, meagre, and uninteresting. On the other hand, it would be folly to attempt to cultivate freedom of expression by allowing children to

write regardless of the rules of punctuation, spelling, arrangement, and the like. These matters of written technique (and we are dealing with only the simplest items of them in this course of study) should not, during the process of writing, hold the center of consciousness.

"In handling subjects drawn from every-day life there will be need at first for the teacher to exercise skill in keeping the children's compositions from becoming trite and trivial. This she can do by training children to discover interest in common things, and by suggesting a live manner of treatment. Nothing in the world is commonplace unless we make it so. Knowledge and interest, therefore, are necessary conditions for good work in composition. Children's lives are crowded with incidents; they have plenty of ideas and opinions which they are eager to express. Every child who is not feeble-minded has something worth saying if he is given a decent chance to say it. From their life at home, in the streets, in school; from their sports, amusements, duties, tasks; from the things they have seen and heard and felt and done; from the things they read and the things they imagine; from all these may be drawn an almost endless variety of subjects, full of the breath of life and the actuality of experience. Some children, of course, are less keen in their observation than others, and all children need to have their eyes opened and their wits sharpened to see interesting themes in the incidents and experiences which make up their daily life. To teach children to observe closely and to think clearly and consecutively is one of the chief values of training in composition."*

"Teachers are inclined sometimes to give an undue amount of dictation, because their classes happen to be poorly grounded on the mechanics; and they postpone original work until a satisfactory condition obtains with respect to their pupils' grasp of technique. This is a double mistake. Correctness cannot be produced from much use of the dictation exercise, because the kind of correctness it teaches cannot be depended upon to carry over into the pupil's free writing. Moreover, to postpone original writing until the technique has been fully mastered is a violation of a vital principle of composition teaching, which is that the motive for the mastery of form must come from the pupil's interest in a real and living content. To drill for a long time for correctness is death to all interest. To permit children to write without regard to form is quite as irrational. They must be trained simultaneously to de-

* Quotation from Sheridan's "Speaking and Writing English."

velop the power of self-expression and the knowledge and the desire to express themselves on paper in accordance with the established rules of correct writing. To do this well, as has been said before, is the real test of the good teacher of written composition.”*

Penmanship.—If no system is used, there should at least be plenty of practice in (1) position of body, arm, hand, and pencil; (2) easy movement which yet gives greater control over lines, so that letters are now well formed, though form is still subservient to movement. The same motives as those indicated in second grade will operate for producing pride in legible work. Still other motives to use are: Wanting the paper singled out as “One of the good ones”; having an exercise sent to the parents as evidence of improvement; writing simple invitations to some room festival, or replying to invitations from another room or class; being quick to answer in writing at the blackboard some written question of the teacher’s. Children should write from about 25 to 35 letters in a minute, and ought to refer to the teacher’s copy of lower-case letters only to better the form during the practice period. A few of the unusual capitals will still need to be copied when needed.

Spelling.—See second-grade statement. The teacher of third grade must also make her own list from her pupils’ writing needs. It should include about two or three hundred words additional to those of the second grade. The plans for making pupils independent in second grade should be used in third (pp. 23–24).

What to expect by the end of the third year.—In addition to what is expected in grades I and II, third-year pupils should show some power of *sustained* attention; ability to judge values when only two or three situations are presented and when the difference is still somewhat marked; ability to tell why a thing is liked or not—that is, to have a rudimentary standard for judging values; and knowledge of how to work independently, using books, blackboard, memorized poems, etc., whenever the teacher cannot assist. Besides the skill in penmanship and spelling implied above, the minimum mechanics to be demanded of third grade, above first and second, (see pages 19 and 24,) should probably be: A. Capitals used (1) in all proper nouns; (2) in all days of the week and months of the year; (3) abbreviations of the names of the months. B. (1) Abbreviations, contractions, homonyms, etc., needed for daily work, like *don’t, I’m, to, too, two*. C. (1) Paragraph *form*, including indention and regular margin; in original compositions children should attempt only one paragraph, but in copying work the second paragraph will often be needed.

* Quotation from Sheridan’s “Speaking and Writing English.”

GRADE IV.

Listening.—Pupils of this grade can now “listen” to stories not only through the ear, but by means of their eyes, since they have now fairly well mastered the mechanics of reading. This ability should be encouraged, as a means of engendering the “reading habit.” All story-telling and reading by the teacher should not be given up, however, since the values named for their use in lower grades are equally operative here.

More than before, the recitations become a source of listening. Fourth-grade pupils begin to reason from cause to effect, and are on the lookout for inaccuracies in facts and conclusions. They are verifying their earlier concepts and generalizations, and want proof for opinions different from their own. This makes them good listeners, and good critics if rightly guided; hence the good recitation, with its opportunities for exchange of opinions, for the asking of vital questions, and for short talks on interesting topics, is the best place to secure intelligent listening.

In games especially, this tendency to “verify” makes children respect law, at least the letter of the law; hence they like literature that deals with obedience to law or the results of disobedience. Hall’s “Viking Tales,” “Pinocchio,” “Robin Hood,” “William Tell,” and other tales of courage, such as are found in history stories and in lives of great Americans, are especially liked. (See the Minnesota Library List.)

Talking.—At this age, associations of ideas are numerous and strong; it is very easy for a child to follow one idea to the most distant planet through the associations that come in one continuous train. Many games can be devised to utilize this ability and turn to account the vocabulary thus brought to light. When, however, it becomes necessary for a child to select a few from the numerous words that crowd the mind, he must be given the motive: *for the sake of clearness, or to prevent himself from being misunderstood.*

In attempting to describe a game so that the listener can’t play it incorrectly, children get the teacher’s meaning of being clear, since, as one child after the other tells how to do some part of the game, the teacher does it incorrectly if there is any license at all for so doing. To illustrate, the children plan to tell the teacher exactly how to play “fox and geese” in the snow. A volunteer begins, “First make a circle.” The teacher makes one—a tiny one, just a few inches in diameter—on the floor, then waits without a

sign for the next direction. The child who volunteered, and others, quickly raise hands to add the *dimension* of the circle. As the description proceeds, pupils become more and more critical of themselves and of one another, not wanting the teacher to "try" a direction until the children feel sure it is correctly stated.

This oral work can be followed by written work on the same theme. Children there have a chance to check themselves, sentence by sentence; and coherency is bound to increase.

Planning an entertainment for another room also sets a motive for clearness, and the need of supplying unwritten dialogue so that the audience which is not familiar with the story can follow it, brings just the sort of improvised dramatizations desired—dramatizations for the sake of self-expression, not primarily for gathering vocabulary and diction, as is sometimes wanted. (See pages 237–241 for illustrations of children's supplementing of "Viking Tales.")

If encouraged to do so, children gain ease of expression, increase their vocabulary, and learn to be coherent, by reporting upon the books being read outside of school. With one or another of these strong motives for clearness, "Make others like the story as well as you do"; "Make them see the pictures or the joke"; "Help them get the drift of the story to the point desired"; the children may be asked to give brief summaries of their stories to the point where some oral reading is to be done.

Picture study can also be turned to good account here. Acting pictures for others to guess can be followed by describing pictures for others to name.

There are two main kinds of descriptions to be worked for, one at a time. There is the kind which names the central idea and then gradually builds up the details to make the picture perfectly clear. This is probably better for sixth grade than for fourth. The other is to make the description end with the most important idea, as Alice Cary does in her poem, "An Order for a Picture"; that is, to work towards a climax. This is especially valuable if children are to "guess" the picture described, since the speaker must make a longer talk, with the motive of preventing the right guess until the final clue is given, and the listeners make many associations, reviewing several pictures suggested by the description.

Nature-study material, literature, cities, or people of different countries in geography, and characters in history, may be similarly used. Here is a "riddle" made by a child after the class had all studied melons, gourds, etc., in the fall:

"I am thinking of the fruit of a common plant. It is round like a ball. It is a dark or reddish yellow. [Here half the school raised hands and volunteered 'orange.'] No. It has a harder skin than the orange. [A few hands are raised; 'gourd' is named.] No. It belongs to the gourd family, but is usually much larger than a gourd. [A few volunteer 'watermelon.'] Cattle like it to eat raw, but we care for it most when mother makes it into a pie. ['Pumpkin,' say many.] Yes."

To show that a quite different treatment is possible, a second "riddle" with the same answer is quoted.:

"My home is in the garden—not the flower garden, though my blossom is pretty; it is shaped like a morning glory, but is larger and is bright yellow. I grow on a vine. The vine has to run on the ground because its fruit is too heavy to let it climb a pole, as beans do. When I was little I was green, but as I grew ripe, I turned yellow—just about the color of my blossom. I have a hard rind, so I won't decay as I rest on the damp ground. Children like to make me into a Jack-o-lantern."

Children should be encouraged to make free use of all room material in illustrating their talks. This teaches them to observe, to relate ideas, and to be ingenious in using material at hand, while the teacher is helped to know whether pupils have the correct idea or not. One child, who planned the acting of the opening stanza of a poem learned by the school—Whittier's "In School Days"—for all who could do so to guess and to recite, had one child hang her hands over the teacher's desk to show "raggedness," a few crouch by the desk for "sumachs," but the greater number running round and round the desk. Every onlooker at once recognized the "running blackberry vines." Though it was funny, the teacher very soberly questioned about why vines are said to "run" and how that sort of running could be better shown.

Games for correcting English errors are probably more effective in this grade than elsewhere, since the children care much for "the rule of the game," and choose to play a well-known game such as "The Black Art" even when the real point is lost by their knowing how it is done. As this game is especially good to correct, "Is it *them* leaves?" and to teach *this, that, these, and those*, the teacher does well to encourage it, even by suggesting slight variations.

Black Art.—A child who knows the rule of the game leaves the room while the rest select some object. On his return, the teacher, or a second child who knows the game, asks: "Is it the clock?" "Is it that eraser?" "Is it this apple?" "Is it these flowers?" "Is it Lulu's shoe?" "Is it Mary's ribbon?" To all but the last, the child answers, "It is not the —." This time he says, "It *is* Mary's ribbon." (He knows because the questioner named something *black* in the question *before* the one containing the correct object.)

This can be varied by use of *this, that, these, and those*; by changing to colors; by having a definite number of questions agreed upon; etc.

Good English is mastered by practice, and the earlier the practice fixes the correct forms in the child's mind and tongue, the

better for him. Drill should not cease just because a child *knows* that he shouldn't say "I seen it"; it should continue until he never says or inclines to say, "I seen it."

Writing.—The mechanics of writing, penmanship, spelling, and simpler punctuation, are by fourth grade fairly well (though of course not fully) mastered. Because children are thus free to give more attention to thought than to mechanics, they begin to enjoy writing, and voluntarily do much, even outside of school. Every teacher now has brought to her little essays, stories, poems (rhymes), and short plays which the children are voluntarily writing. By kindly criticism of these efforts, by encouraging their continuance, and by using them (with the writer's consent) to incite other pupils to similar effort, the teacher will find written composition not difficult to secure.

Besides the topics chosen for the voluntary compositions, the teacher will find fourth-grade pupils interested in bringing to every recitation some supplementary material, gathered from parents or books at home and not known to the majority of the class. The child thus has a strong motive for being accurate and clear. The class criticism should be mainly on accuracy and clearness. If other pupils have read what disagrees with some statement made, the point should be challenged and all should then work together to secure the best authority on the question. If points are not made clear, as proven by questions or by another child's reproduction of what was said being unsatisfactory to the one who wrote it, the writer must try again to make himself clear.

Assigned topics should possess personal interest to the pupils, should be possible of execution, not too long, and very definite. Perhaps teachers err more often on this last point than on any other, for such topics as "Dogs," "My Trip West," "What I did last summer," etc., are commonly assigned. "It is impossible for any child to write in an interesting manner upon such a subject within the limits of a single paragraph. At best, it can be no more than a bare catalog of events. Within the compass of any vacation, long or short, there is a score of incidents and experiences exactly suitable for narrating or describing in the written paragraph, because they give opportunity for striking and vivid detail; but to ask a child to set down in a single paragraph the doings of a whole vacation is to foredoom him to failure. Teachers should, therefore, narrow their subjects. This focuses thinking, establishes a single point of view, and makes it possible for the child to put his own thinking into his composition. After that, even, it will be found necessary to train children to single out some particular

points in their specific subjects, so as to make some one idea stand out prominently." There is no doubt that, with even little guidance, pupils in grade IV can pick out and hold the central or bigger thoughts; can hold a central thought and work around it; can show the relation to it of a few of the minor ideas.

For keeping up drill in the mechanics, nothing will be more helpful than a continued use of blackboard questions and answers, with such adaptations as are necessary to fit the size of the class and blackboard space.

"The *dictation exercise* is useful in developing the power of self-criticism, because of the opportunity it affords pupils to correct their own papers in every minute detail by comparing them with the teacher's blackboard copy (uncovered after the writing) or the printed original. No exercises are more important than exercises in which the pupil corrects his own written work. Careful and intelligent criticism of his own work fixes correct habits and develops a habit of discrimination which helps him to undertake new work more confidently and to execute it more accurately. The dictation exercise is an especially good starting point for training of self-correction because here the field of criticism is limited to a small number of points, all of which have to do with the mechanics of writing, and all of which, besides, are arbitrarily determined by the matter dictated. A formula for correction, *suited to the grade*, may be written upon the board, or upon a card which each pupil has on his desk. Such a formula contains, let us say, the following points:

- | | | |
|-----------------------------|----------------|---------------------|
| 1. Indenting the paragraph. | 4. Apostrophe. | 6. Quotation marks. |
| 2. Capitals. | 5. Comma. | 7. Spelling. |
| 3. Periods. | | |

The pupils are instructed at first to look through their papers for one kind of mistake at a time, until they have gone through the list. They correct each error as they find it. In this way not many errors will escape them. After a while they will outgrow the need of the formula as a correction chart; but at the beginning it serves a very useful purpose. It helps to systematize the correction work, and impresses upon the pupil's mind, more effectively than talking commonly can, what the big matters of written technique are.

"*Copying* continues to have a value; but a 'time limit' should be set to exercises in copying, if a pupil's power of observation and accuracy are to be rightly measured. A teacher cannot measure the power of all the individuals in her class if some are given twice as long as others to finish the same exercise."*

* Sheridan.

The need of writing dialogue to be used in room-plays will give a strong motive for mastering the correct placing of quotation-marks and the use of the comma preceding a simple quotation.

Though the *mastery* of the apostrophe may well wait until the fifth grade, the teacher of fourth grade may give such parts of the work as her pupils need. (See pp. 245-251 for full lesson-plan on this topic.)

The writing of simple letters and notes, including the addressing of the envelope, are also new bits of form to master here. It is better to use one form consistently throughout a school than to try several and perhaps confuse the children. Since every child will need to write letters after he leaves school and may never need to write any other form of composition, this work should be emphasized and made as interesting as possible in every grade from this on.

"The form, or arrangement, of the letter is a matter wholly separate from the writing of the letter itself. It is a matter of pure technique, and should be taken up as such. Thus, a letter should be placed on the board, or hectographed, and the attention of the pupils called to the mechanical placing of the several parts. After sufficient study, the letter should be *copied* by the pupils. The letters that the teacher puts before the children for study of the form, should be models of letter writing as well as of correctness of mechanical arrangement. The body of the letters so used should be short (not more than five or six sentences in the fourth grade), but they ought to read like real letters from real children. Nothing should be said about the body of these letters at this time, but the children will catch the spirit of them without comment from the teacher. Later on, these same letters, or others, should be dictated to test the children's knowledge of the form. All models presented children should conform strictly in arrangement and punctuation to the standard letter form adopted. When the form has been well taught, the work of writing *original* letters should begin. It is the almost universal experience of teachers that the letters which children write in school are painfully unnatural and uninteresting. That is because they have usually no real letter to answer, no real person to whom to write, and no reason or desire at that particular time to write any kind of letter to anybody. So far as it is possible, therefore, the letters written in school should be real letters to real people."*

Penmanship.—If no system is used to give the teacher her outlines, she should, in fourth grade, drill, as before, on movement, but may now give even more attention to form, size, and slant of

* Sheridan.

letters. In fact, the final handwriting of the child will now *begin* to be formed, hence he should be made conscious of the goal. He should not compete with others, however, so much as with his own record. He should be able to write well and with muscular movement about 35 to 45 letters a minute. A fortnightly, weekly, or monthly specimen of a child's handwriting, selected from any written exercise of the day, will serve a double purpose. It will help the child to check his own improvement and it will make him careful about all written work, since he doesn't know which exercise will be chosen to represent him. Unless penmanship is kept up to the standard in all classes the special writing period will have little value. It is wise not to select penmanship specimens on a given day for all pupils, but to make the individual selections at times which will either encourage or prod a child to further effort. Work below standard should be redone outside of school hours.

Spelling.—Throughout fourth grade, as before, greater emphasis should be placed upon the habitual spelling of small words needed daily in every form of written exercise rather than upon longer unusual words. However, the rapid oral vocabulary acquisition of third-grade pupils and the need of its use in writing in fourth grade, makes necessary a separate period for (1) learning how to look at words, (2) how to note hard places, (3) how to relate the word to others that are similar, and, hence, (4) how to master the word. Pupils should feel sure of their spelling of from 700 to 1000 common words, aside from their individual mastery of from 100 to 300 odd words met in reading, geography, etc.

What should be expected by the end of the fourth grade.—All required before in the way of having something to say, and of saying it well to a sympathetic audience and while standing on both feet.

With the grasp of a central idea about which subordinate ideas cluster, some of the pupils can be led to use *when*, *which*, and *while*, as connectives; but it is better to keep sentences short and clear than to change them into long, meandering sentences which would destroy the children's "sentence feeling."

More freedom is seen in written work, because children are in large measure now released from detailed attention to the mechanics. Yet accuracy in using acquired knowledge on a short, interesting composition, should outrank mere quantity poorly done.

Children should have acquired a few standards for self-criticism, and no work should be handed in until it is as perfect as the child knows how to make it.

Besides the mechanics already named for grades I, II, and III, and implied under Penmanship and Spelling, pupils should be held

for: A. Captials: (1) In all proper names used; (2) as needed in writing simple letters and notes, and addressing an envelope; (3) as needed in the undivided quotation; (4) titles of stories, poems, books, etc. B. Final Marks: (1) Exclamation-point. C. Com-mas: (1) In a series of words; (2) in writing a simple quotation; (3) as needed in letter forms. D. Abbreviations, contractions, homonyms, etc.: (1) All needed for daily work; (2) apostrophe in a few simple genitives. E. Other forms of punctuation as needed to aid clearness of thought: (1) Quotation-marks; (2) poetical forms (children now composing rhymes or poems).

GRADE V.

Listening.—Besides all sources used before, (see Grades I to IV,) teachers of the fifth grade and above should make constantly greater and greater use of the recitation, and, in addition, should urge pupils to listen to speakers everywhere. Secure the coöpera-tion of the superintendent, so that he and other visitors may occa-sionally tell an anecdote, make a speech, or tell a story.

Pupils begin now to show a real appreciation of values in talks heard, in nature, and in the lives of eminent citizens. In attempt-ing to voice this appreciation and discrimination of values, children will especially need descriptive words (adjectives and adverbs), though of course other parts of speech will also be added to their vocabulary. If encouraged to do so, they will be on the lookout for usable words in talks heard and in reading done until a rich vocabulary of descriptive words becomes theirs.

Listening to quotations from good literature, selected to fit the general topic under discussion, usually ends in one or all of several things: (1) Vocabulary increase from just the hearing; (2) chil-dren's keeping a "dictionary" of quotations, instead of one of words as in second grade (in loose-leaf note-books, so that the quotations gathered can be classified under such needed titles as *Autumn*, *Spring*, *Fire*, *Wind*, *Trees*, *Snow*, *Dress*; and quotations may either be copied, or referred to by author, volume, page, and line); (3) pupils grow interested and read more for themselves. While chil-dren are accumulating a lengthy vocabulary, lessons and games which demand discrimination in their use will be needed to unite ear and tongue in favoring correct usage.

Lack of training in *listening* to good literature, as to good music, causes an individual to miss educative opportunities. He hears a story or talk, and knows in a general way that it was pleasing; but he doesn't know why, and hence cannot make his own the idea that made it pleasing. If he learns early to listen, and then is led

to note whether a talk was pleasing because of the thought or of the expression, later analyzing each of these, he has a background for his own compositions. The child of ten or twelve begins to realize how big the world is, and how many adventures lie ahead of him and his companions. That he may have some notion of what to expect, he reads stories of adventure, and stories of men and women who are making present social conditions. He likes to hear read or told the Arthurian legends, tales of Ulysses (especially when recognized as an allegory), Beowulf, Roland, etc., the story of Perseus and Medea, tales of local and state history, and of historical characters everywhere in the United States. He also likes Ernest Thompson Seton's stories, as well as books like Poe's "The Gold Bug" and Stevenson's "Treasure Island," though these are too difficult for class use in the oral reading hour.

Talking.—Before this, pupils have talked so unconsciously that if parents and teachers have been at all thoughtful, freedom has not been hard to secure. Now, however, in the fifth, or sometimes in the sixth grade, the child begins naturally to be self-conscious, and extra effort must be made to ignore all results of the "awkward age." Feeling his own weaknesses, he giggles or hesitates when he recites, and is inclined to ease his own feelings by laughing at similar signs of self-consciousness in his companions. The teacher must, by gentle measures, by precept, and by example, continue to make all listeners into a "sympathetic audience." Through the use of stories about people of other lands, their dress, their speech, their games, their customs of all kinds, children may be given *many* standards instead of just one. If the teacher can lead children to see the beauties and picturesqueness, rather than the oddities, of other people's dress and speech, he will be doing much to arouse the spirit of cosmopolitanism so much talked about now. If suggestion is not effective, children must be forced into courteous attention, into absolutely no laughing *at* one another, though laughing *with* one another over certain situations may well be encouraged. Not a person in the world is so free from awkwardness of some sort as to have the right to ridicule others, and nothing more quickly betrays provincialism (either in city or in country) than this "making fun" of another because he fails to conform in some minor detail to the one (and only one) standard known to the laugher. It is traveled, cultured people who have seen much of life, have recognized the fineness of character in a rude tent-dweller, have visited many localities and known numerous ways of doing one thing, who know that *forms* are very superficial bases for the judging of worths. Let the audience, then, be courteous and sympa-

thetic, looking for what is good no matter how hidden, adversely criticizing the bad only when such criticism will help the speaker.

Narration of interesting experiences (actual or imaginary); descriptions of people in geography, history, or literature; descriptions of birds, trees, and gardens, from nature study or general lessons; and explanations of how to play games, or to make some bit of apparatus in manual training, some garment in sewing, or some dish in cooking; are all means for the securing of (1) *something to say*, and (2) saying it (a) interestingly, (b) fluently, and (c) clearly.

Poetry committed to memory and recited verbatim, and stories, jokes, anecdotes, and incidents, given in the child's own words but worked over often enough to insure good telling, will be valuable aids to good talking. Children may now learn to choose the essentials or the non-essentials which make a given topic interesting or clear, and then to develop those points, not simply relating a list of events associated by contiguity alone. The use of a slip of paper containing a few headings may be encouraged to induce thinking before speaking.

Because of the tendency to self-consciousness, enunciation will be one of the things needing attention; but since children rather like enunciation drills, such as the old-time Theophilus Thistle and Peter Piper rhymes, mumbling need not prevail. Errors of grammar, local and individual, are omnipresent; the same sorts of drills as those given before must be used, but varied, of course, to suit the development of the pupils. Though no grammar is taught as such, pupils may well hear and learn by incidental use the terms, *subject*, *verb*, *noun*, *descriptive word*, or even *adjective* and *adverb*. Posters containing such questions as, *Do you say, "He doesn't catch any fish"?* or *Did he say, "My, my! my body is broken!"?* accompanied by pictures of Simple Simon and Humpty-Dumpty respectively, so that pupils tend to answer, *"Yes, I do say, 'He doesn't catch any fish,' when he fishes in a pail!"* or, *"Yes, he did say, 'My, my! my body is broken!'"* help children correct "*he don't*" and "*is broke.*" Any pictures and suitable sentences may be used, and they may be large enough for all to see many times a day, unconsciously answering each time; or many small cards may be used, thus making a game for oral or for written work, teaching, in the latter case, the correct use of quotation-marks as well.

Writing.—If a class has successfully done all required in grades below this, the emphasis may now well be put upon two lines of work: (1) letter writing, and (2) written vocabulary acquisition. Letters may now contain at least two paragraphs, with two such distinct themes as to give pupils the correct paragraph idea and

not the erroneous one so commonly expressed by even high-school graduates, "I thought the page would look better to be broken up into paragraphs;" "I like best to read books containing short paragraphs, so I thought I'd make mine short;" or "It seemed about time to indent." If one boy is writing to another about his new sled, for example, let him put into one paragraph all he plans to say about how he made his sled, and in the second paragraph, what fun he and others have had with it. The conventionalities given before should be observed.

Vocabulary may be gained through games, through united class effort (see pages 251-252 for illustrations), and by planned lessons for the purpose, including the writing of simple rhymes (commented by being called poetry).

Dictionary work can now be made to aid all language efforts, and lessons on certain mechanics such as quotation-marks and the use of the apostrophe (see pages 98, 245-251), can be made interesting and also related to other lessons.

The continuance of the plan mentioned on p. 34, of frequently writing questions and answers, will secure fluency as children learn to think in writing, will help the spelling of all little words, and give a certain amount of ease in sentence structure. "The coöperative work of teacher and pupil is made more impressive if the blackboard is brought into use in working out improvement in the sequence of thought, the sentence structure, and the choice of words. The teacher may copy upon it compositions which are to be criticised by the class; or he may use it for presenting a model composition for the pupils to follow in their own oral or written constructions. One of the best ways to interest and to improve a class, particularly the poorly equipped or the indifferent members, is to have pupils write their own compositions on the board, instead of on paper. This method can be used with great profit in a grade as low as the third, and is increasingly valuable in higher grades. Here the writer is certain of an audience, and equally certain of an immediate estimate of his effort. He desires the appreciation of this audience, and wishes to avoid any unfavorable criticism from it. Therefore it is natural for him to look over his work, correcting his own blunders before reading it aloud to the class for their comments. Such exercises are certain to develop the appreciation of the difference between orderly presentation of events and aimless wandering; to deepen the feeling for correct structure, and the knowledge of the right use of capitals and elementary punctuation-marks."*

* Sheridan.

Spelling.—Oral spelling will become more and more valuable as pupils learn to visualize words and name the letters from these mental pictures. As said before, copying and dictation have some values (see grades II to IV.) “Selections for copying for all grades should be interesting, and in the higher grades they should have real literary quality. National songs and selections frequently repeated orally are suitable material for copying. It is notorious that children are seldom able to write such things correctly. This is because the words are mostly learned by ear.”

Penmanship.—For many of the retarded children who reach the legal age for leaving school at the end of the fifth grade, hand-writing is permanently fixed. Other pupils are not harmed by much practice at this point, and a cursory study of several children shows that at about the age of twelve, there arises a definite interest in hand-writing, so that pupils voluntarily spend half hours in practicing on just one letter well made by a favorite teacher. Teachers often wonder what to do about left-handed children. A London experiment made in 1911–12 “gives some *slight* indication that left-handed children deteriorate somewhat through being forced to write with the right hand, and consequently it is suggested that the art of writing be practiced by the superior hand only.”* The specific penmanship errors of the grade and of individuals must, by practice, be eradicated. The device of testing pupils’ improvement by comparison of specimens of their hand-writing with selected standards in some penmanship scale is worth using throughout the remaining grades of the elementary school. Poor papers in class must not be tolerated. Penmanship must show legibility, easy movement, letters well formed, and of uniform height, slant, and spacing. The rate should be about 45 to 60 letters per minute.

What to expect by the end of the fifth year.—Gain in power of voluntary attention, in picking out essentials from a heard or read story or topic, and in reciting coherently. Ability to use the dictionary, but, better yet, “a dictionary conscience.” Knowledge of the following mechanics in addition to those demanded in lower grades (see same): A. Punctuation-marks necessary in: (1) divided as well as undivided quotations; (2) using the noun of direct address; (3) at least two forms of letter writing—business, and social. B. Mastery of spelling and use of: (1) All kinds of genitives (nouns and pronouns); (2) simple plurals of several classes of nouns, such as (a) those ending in y, (b) in f or fe, (c) in o, etc.; (3) past tense of common irregular verbs. Correct spelling of about two-thirds of

* *Journal of Experimental Pedagogy*, Vol. I. London, 1911–12.

all words needed for written work, and ability to find others in the dictionary. Tests show that pupils can easily spell correctly about 1500 words, though these may not be the same words for all pupils. The "100 demons" of the South Dakota Investigation might well be conquered in fifth grade. (See page 261 for list.)

GRADE VI.

(See suggestions for all grades below this.)

Listening.—Since organization (including outlining and paragraphing correctly) is the point of emphasis in sixth grade, the "listening" should be directed to the recognition of main points and to "turns" in the thought. Sometimes, as the teacher reads or tells a story, he may ask that pupils name the ideas recognized as emphatic. Or, he may ask for a show of hands whenever pupils feel that a change in thought has occurred. Their judgment in both cases may be checked by the author's paragraphing, the children always first giving their reasons for feeling that a new paragraph was beginning, or that new ideas were discussed.

The teacher must take pains to read only the best of literature, since it is regrettable but true that many writers of pleasing magazine stories are careless about paragraphing, and the earlier school-readers are notably badly paragraphed, since the makers seemed to feel that children should see only short paragraphs regardless of the meaning of "paragraph"; or else planned to make paragraphs of equal length, so that the teacher need not worry about any unfairness to different pupils when each in turn read a paragraph. (Good modern readers have improved on this.) Later, *when pupils have secured a relatively fixed standard*, poorly paragraphed material may occasionally be given to pupils to criticise adversely. Or, hektographed material containing prose or poetry without indention may be given to pupils. This material should clearly fall into large divisions; complex organization is beyond these children. Pupils should study the material, give a title to the whole, and a subtitle to each thought division, indicating thus, ¶, where paragraphs thus chosen should begin. Results should be checked by comparison of pupils' work with the author's; the author may not have made the only grouping, hence all sensible work should be approved.

Pupils should be gathering ideas by means of the eye as well as the ear, and in all lessons should be "listening to" or "feeling" the paragraph and section divisions of a topic. By naming each paragraph in a short story, by naming stories, naming paragraphs, or sections in the geography, history, and reading lessons, and out-

lining the same, and by discriminating points made and selecting those desired in reference reading, pupils will be learning the lesson of the grade—*organization*.

Sixth-grade pupils are alive to speech rhythms, and enjoy learning bits of foreign languages. If encouraged, they will gather from public speakers, from visitors or helpers in the home, from the German shoemaker, from the Greek confectioner, the Italian fruit vendor, or the Chinese laundryman, bits of foreign speech that will vitalize all language study. The teacher who can wisely encourage this, even adding from his own store of information some Latin or other ancient language, and possibly some modern language, will lay a strong foundation fondness for the study of language. Pupils are interested in the history of our language, and listen with unabating interest to old English ballads and to tales from Chaucer, though the odd spellings prevent these from being good reading material at this age.

Besides ballads and the "Canterbury Tales," pupils enjoy, in poetical form, translations of the "Iliad," of the "Odyssey," and of "William Tell." They like some of Macaulay's "Lays of Ancient Rome," and greatly enjoy stories of foreign lands and peoples, as well as of boys and girls away from home, especially at some academy or college. "Hans Brinker, or the Silver Skates," "Arthur Bonnicastle," "Tom Brown's School Days," "Little Men," are books loved by sixth-grade boys. They also like "The Gold Bug," "Treasure Island," and other books named for fifth-graders.

This is a good grade in which to begin putting on the blackboard weekly or semi-weekly quotations that fit the season; the daily work; some disciplinary situation; or, occasionally, a clean, clever joke. The teacher should watch their effect on the children, and if they seem to appeal, suggest that the children hunt quotations they would like to have used; later, the school may elect a quotation committee, with the teacher as critic or censor, to find and write the quotations for a month. Incidentally, if pupils keep quotation-books their vocabularies, spelling, and penmanship, will be benefited.

Talking.—In recitations, in reading, in dramatizing, in telling a story or incident, in talking upon a topic, sixth-grade pupils must be encouraged to go a step beyond their earlier attainments. They must, of course, have something to say, hence must continue to (1) select a topic about which they know something; (2) narrow to a point that can be given in the allotted time (or space, if *writing*); (3) see that the point selected will be entertaining or instructive; (4) tell it so that hearers will be interested. In the lower grades, no more needed to be said, for, to be interesting, the short talk

needed little more than the first step in the process, namely, *catch the listener's attention*. As the topical recitations or stories or talks grow longer, pupils must be given the second step, which is, *hold the listener's attention*. To hold the attention of one's audience the speaker must have his talk well organized. There must be evident unity of purpose and a consistency of development. After the essential point is selected, the subordinate ideas which aid the effective development of the topic must be well grouped. In any case, the child must learn not to "jump about," touching first one idea and then another, then back to the first, etc. Sixth-grade children enjoy hearing Riley's "The Bear Story, that Alex 'ist Made Up His Own Self," evidently told by a child of four to six years of age, as an illustration of the *inconsistency* and *lack of unity and organization* which sixth graders are working to overcome. This second motive lasts well into, if not through, the seventh grade, so the teacher can afford to spend plenty of time upon it, securing natural and not forced growth.

"Language work carries a magician's wand of three-fold power: it gives the child firm foothold from which he may take his next step upward; it throws the light of self-knowledge among the shadows of that chaotic self whence his personality struggles to emerge; it finds for him a voice which hastens his social birth, and sets him with his fellows and of them, not merely among them.

"At almost any point in his development his power may be stunted by a growing disproportion between his experience and his expression. Crudity of expression on one plane becomes crudity of thought on the next higher; one can think and feel somewhat in advance of his power of expression, but that distance is limited. Inadequate language development in early years thus works incalculable harm to later thought, but so subtly that it is often impossible to sift the induced from the native barrenness of later thought. Nor does the blighting effect of cramped expression desolate the narrow field of thought alone; delicate perceptions die away, fragile aspirations droop, yearnings toward the high fade to dull commonplace, for lack of developing expression. Let the child but learn the lineaments of his thought well enough to chisel out its likeness in words and he will straighten many a twist; let him learn the soul of his feeling well enough to breathe its life into words and he will strangle much that is ignoble and extravagant.

"The fullest worth of the individual comes through his touch with others; yet sympathies, faiths, keep silence within him if there is fear of distortion by a garb of unaccustomed words. Anything that will uncover these hidden values is of great worth; and the

power to clothe the inner reality in words which shall truly reveal the individual, sets free his social energy and gives him a deserved rank among his fellows.”*

Language is the right, then, of every individual, a right so important that not one teacher can afford to let an opportunity for language training slip by. Teachers who use choice and courteous English in the daily work of the schoolroom employ one of the most effective means of securing pleasing speech from their pupils, and, incidentally, they secure deference from their pupils and acquire a greater social charm.

That pupils of all grades are word-poor is a well-known fact; but that youth is the time to acquire a rich vocabulary few teachers realize sufficiently to make vocabulary work a definite phase of the language work of every grade. It should be so made. “Watch every opportunity to enrich the child’s store of forcible words. Whole lessons need to be devoted entirely to word gathering. Once get the children eager to express a definite idea and they very rapidly absorb new words which will aid them therein. In general the best source for new words is the class. Whenever a need for words is felt, make a class list; it is astonishing how rich is the combined vocabulary of a class whose individual members are word-poor. The teacher may add such as he desires them to add to their stock; but they take from each other most readily. It is valuable to read some bit of literature gemmed with the sort of words they will need, just before the task in composition is set them. The main thing is to give pupils their new words in response to a definite need. Take a good copy of Rosa Bonheur’s *Lion*, and try to get words describing the expression; or mount a milkweed-stalk and set the children trying to picture it in words; examine a winged Mercury, and the children’s vocabulary will multiply, in certain directions, wonderfully; compete to see who can, with a limited number of words, make a fire brightest, a sunset most delicate, a man angriest, a curve most graceful, a boy most courageous, a mountain ruggedest, and so on. This sort of work should not be too frequent, but it is most valuable in multiplying new words. The surroundings and interest of any class will furnish a thoughtful teacher with innumerable openings for such exercises.”*

Teaching pupils *how to study* different lessons is one of the main tasks of the sixth-grade teacher, and the work there done in getting pupils to recognize main points, to unite and name related facts, and to supplement the thought, will have a very direct and stimu-

* *Winona Normal Bulletin*, January, 1910, (out of print).

lating effect upon the language work, both oral and written, of the grade.

Earlier grades give the values of memorizing poems and quotations. Dramatization in which pupils use an author's exact words is valuable for training in vocabulary and conventional sentence structure; but the other form of dramatization, that in which pupils give the author's thought but express in their own words what *they* would feel under the same circumstances, gives better training in self-expression, and should be gradually used more and more in advancing grades.

Correction of errors, and enunciation drills, must be continued.

Writing.—The development of the paragraph sense is the new work of this grade, as has been given under the two headings above. The teacher needs to make sure that "to the child paragraphing is a matter of real thought division, not of external form. The teacher must constantly guard against two things: he must not try to induce a complexity of organization natural to him but beyond the power of the child; and he must not insist on his own organization, even on large lines. The child can think only in large divisions; if the teacher tries to refine the child's paragraphing he will feel each separate thought or fact by itself, which is the very reverse of the organization the teacher seeks to induce. The child must be permitted to reflect his own divisions in order that his own power to organize may grow. He will not gain individual power by being told where to indent. Class discussion over paragraphing is very valuable, as the children's minds are nearly on the same plane and they can therefore give and take organization from one another effectively. When the children do actually organize their material in large divisions, it will yet be necessary to drill them on indention to reflect the same. The important thing in this drill, as in all formal work, is that the indention be kept before them always as a sign of a thing that actually exists in their own minds, not as a thing of value in itself. For example, let a child who has written on 'The Adventures of One Day,' hold his paper before the class for inspection, with the question: 'How many adventures?' If the reading of the story does not corroborate the decision the class made from his indentions, he must remodel his work. Or let a child place his list of large topics on the board, and challenge others to find any topic in his paper by inspection. In more advanced work let him read a sentence and challenge others to point to its place by noting under what topic it should occur. If the one challenged misplaced it, he loses; but if he can prove that it should have been under the topic he chose, the reader loses. Children preparing work with such a game in view organize their work with eager care. Numer-

ous variations of such exercises will occur to any teacher working along thought lines.”*

“See that children get the habit of going over their work carefully, before handing it in, and making any changes they think will improve it. Pupils should feel free at such times to draw a line through a word and substitute a better one, or make any other changes that they think are for the better. The wise teacher is not distressed by changes of this sort made upon the paper. By degrees, the pupils who make them will learn to anticipate errors, and choose in advance the better word or the better form of sentence. We are not looking for perfect papers; we are looking to develop the power that will later on make them less imperfect. This does not mean that neatness is not to be encouraged and commended, or that slovenly work is not to be condemned. It means that we must be big enough not to fret over little things *so long as the children are clearly on their way to better writing*. And every child is on his way to better writing who is getting the habit of scrutinizing his composition and correcting and improving his work before the paper is carried up to the teacher.”†

Letter writing must be continued, and the business letters which pupils can now write asking for desired material of firms who distribute advertising material valuable for school use, will give practice in paragraphing as well as in letter forms. Other letters, to publishers, local senators, or authorities on special lines at the State University, for the sake of settling some mooted question, will give additional motives for real letters.

Dictionary work should be continued.

Anecdotes, personal experiences, imaginary incidents, current events, and jokes, are all good subjects for brief themes. Interesting stories selected by the teacher may be read, hectographed, or put upon the blackboard, in part only, pupils being asked to finish the stories as they conceive the end. This gives a story an interesting beginning and “sets a pace” for pupils to follow; gives children a chance to exercise ingenuity and yet keep a story consistent; helps less-capable pupils through hearing others’ endings read, and gives a motive for good climax writing.

Preparation of some form of entertainment of parents or of pupils from another grade will vitalize the composition work for several weeks. The selection of the theme to unify the whole, the outlining of the plan, and the distribution of separate parts to individuals or to committees for execution, give strong motives for

* *Winona Normal Bulletin*, January, 1910, (out of print).

† Sheridan.

organization. For example, near Christmas time, the pupils of one sixth grade planned to entertain the pupils of other grades by showing Christmas customs in other lands "in ye olden times." German, French, Italian, and old English customs, were planned for. Children sought reference-books, and some reported daily in language hour until all had enough information to continue the organization and distribution of parts to be written and acted. Then the children wrote, and tested the unity and clearness of what they wrote on the class members, who put themselves into the position of the expected visitors and helpfully amended or approved each writer's result.*

Spelling, penmanship, and other mechanics of writing already taught, must not be permitted to deteriorate. No work below the child's best ability should be accepted, but should be rewritten before the teacher consents to criticize it. If the "One Hundred Demons" have not been conquered in fifth grade, they should be here. (See p. 261). Pupils should be urged to use the dictionary for correct spellings (p. 98) of all uncertain words, and should be encouraged to conquer as many of the words needing to be "looked up," as possible, so as to raise their average above the minimum standard indicated. Note books containing words looked up (with date of need) may be kept by individuals. The teacher should look these over frequently, to be sure the child has correctly copied the right spelling, or he may be spending valuable time to no avail on wrong forms. These lists should be studied, and, at the spelling-period, children of similar spelling efficiency may be paired, each pronouncing, in a low tone, to the other, his individual list for writing. To check one's own growth in power is a great incentive. At other times the teacher may take all individual lists, select the most "popular" twenty-five words, and help pupils in studying them by noting hard places, by comparing them with others of similar derivation, and by applying a few known rules to the spelling of their derivatives. He may then test the entire school on these twenty-five words and their derivatives. (Other devices will be found by resourceful teachers.)

Penmanship should show, in its result, "flow," or easy control of the hand, with form, slant, and spacing of letters, up to the standard selected by the school. If no special system of penmanship is employed, the teacher may use any good scale (see p. 259) and expect that pupils could easily write from 60 to 75 letters per minute of the quality chosen.

* Miss Etta Howell, teacher.

What may be expected of sixth-grade pupils.—Ability to get the number of points made, and, if the production is not too long, the gist of each main point, in whatever sort of talk is heard or in material read. Ability to talk to a point with better organization than in any preceding grade, but with all other desired qualities still present. (See lower grades for posture, spontaneity, etc.) Ability to write at least two paragraphs on one theme, with a distinct feeling of the paragraph idea.

Sentences will still be reasonably short, though many pupils may begin to construct complex sentences, a result to be encouraged if the child does not get “lost” in his long sentences. He must be made to feel the need of saying something about the subject of his sentence, or all earlier work will quickly be undone.

Letters, written *without any help* from the teacher, should show a mastery of the correct letter-form and reasonably interesting content; be grammatical in construction; be well organized, spelled correctly, and written in a smooth, controlled hand, with slant, spacing, and forms of letters, up to the standard for sixth grade.

Each pupil should spell without second thought at least 75% of all needed words, and should know how to use the dictionary rapidly for finding all others of which he isn’t certain.

Other mechanics required and not already named are few. The teacher should carefully list all given in lower grades and note any failures of sixth-grade pupils to meet the standards. Drills must be given wherever necessary, but, in general, the need of mechanics should be motivated by the desire for clearness and ease of reading by the one who is to read the manuscript. Probably the use of the comma before “but,” or in a series of words or phrases, will be all the additional punctuation needed.

GRADE VII.

In no grade below the eighth is the guiding hand of the teacher more needed than here. Greater individual differences exist than ever before, because pupils are approaching adolescence and are in many different stages of development. Some are still children; others feel awkward because of rapid physical development; a few retarded pupils seem already too mature for the necessary school-work of the grade; all are more or less self-conscious, often expressing their real feelings by exactly opposite conduct. Boys who really pity an injured animal fear that they will be ridiculed for soft-heartedness, and so kick the wounded creature out of the way. Girls, also, are quite apt to throw off the yoke of conventional behavior and experiment with extremes, laughing and talking bois-

terously at one time, and acting so "shy" as scarcely to be heard in class at others. When pupils do express themselves, they are inclined to do so extravagantly, and even to voice extravagant judgments. "The meanest boy in school," "The most beautiful hat in the world," "The nicest, cutest, cunningest" something, "The most awful, terrible" something else, etc. With this expansion of Self, children who are not carefully guided are apt to become opinionated, intolerant of others' acts, and conceited over their own powers of execution. All these feelings and actions will definitely affect the language work, and the teacher of seventh- (as well as of the eighth-) grade pupils may well pray for daily wisdom to guide aright the thoughts, feelings, and actions of his pupils.

Listening.—The literature selected must meet such varying needs as to make any short list very misleading. As, in the lower grades, the teacher's cup of stories needed to be running over, so, in upper grades, teachers must have at their mental call books or stories to meet every individual case.

Stories of how timid women braved dangers under the stress of necessity, and of how adventurers, explorers, and others, *individually* conquered physical and social conditions, are all forms which appeal to pupils' ambitions. Care must be taken that pupils do not become enamored of books which represent young boys and girls as doing what no adults have succeeded in doing. Stories of Sibley, Radisson, and others, help children to see that victory is the result of effort, not of "luck." "Treasure Island" may now be read in class; and other books by Stevenson, as well as some by Cooper and by Scott, can be read outside of school and reported on in class. Fiction and fun can be had in plenty, but the teacher must be sure that the pupils are getting no warped notions of how to succeed in life. Warner's "How I Killed a Bear," and "Camping Out," as well as Irving's "Legend of Sleepy Hollow," are genuinely funny to seventh-grade pupils. "Rip Van Winkle," "Miles Standish," and "Evangeline," appeal to different personalities, while some of Lamb's "Tales from Shakespeare," and Scott's "Marmion" and "The Lady of the Lake," find sympathetic listeners.

NOTE: See the Minnesota Library List for many other books suited to sixth, seventh, and eighth grades, since the seventh-grade teacher must know *all*, if he would guide the individual reading of thirty or more pupils who either crave, or ought to have, certain types of reading at different times. He should also be familiar with the books in various professions or vocations, so that he may assist pupils, soon to leave school, to choose their work wisely. This is, however, in larger measure, the task of the eighth-grade teacher.

Pupils must be encouraged to share their outside-of-school reading, and this can only be done if the class members are good listen-

ers. Knowing what each reader is to give, the teacher may set a "listening" problem for each situation; or he may encourage the reader to do so, himself telling the listeners what to look for, or on what he would like an opinion or help.

Before pupils write on a given topic, the teacher may well read quotations upon the same subject from many sources, leaving pupils free to use what their ears were attuned to gather of choice vocabulary or of forceful sentence structure. The reading of riddles, jokes, and limericks, (dropped into a box,) may well occupy a short period every week or two. These should be signed, so that the teacher, *who must read every one*, may privately help pupils whose contributions are rejected. If too carelessly written to be easily read at sight, they may be corrected and put into the box for the next week; or, if the fun was not in good taste, the teacher must, after pointing this out, quietly cultivate the child's taste, giving him books full of wholesome humor and urging that he make another contribution. "Alice in Wonderland" often appeals to upper-grade pupils more than it does to lower, and, even though the explaining of a joke may kill the fun for the one who sees it, many a less-keen child will grow keener if the reason for the laughter at a joke is explained. Through puns, riddles, and rebuses, pupils learn the double meanings of a great many words, and become more discriminating in speech and writing.

As in lower grades, the recitation and all forms of entertainment heard should be listened to attentively and checked by criticism (favorable and adverse), with reasons for the judgment offered. It is not enough that one pupil should say of another's recitation, "It was good"; he must add, "Because I could hear every word"; "Because he said he would make three points, and he did"; "Because he used just the right words to make us see the picture; I especially liked the words, 'spreading branches,' because it made me think of a big or an old tree"; or any similar and *true* criticism.

Talking.—Unless pupils have been brought up to think over what they are to say before they speak,—that is, roughly to organize their talks,—and then to hold to a point as they talk to an audience, and do their best to catch and to hold the attention of that audience, the teacher will need to go back far enough to lay just such a foundation. (Read work indicated for at least grades IV to VI; preferably for all grades.) If the preceding work has been well done, the seventh year may profitably be spent in securing greater facility in all lines, in polishing talks more, and especially in refining the organization and the telling of a story so as to hold the audience. More than before, each child should have some-

thing individual to tell—a new (actual or imaginary) experience, joke, or incident; a story not heard by the class before; a poem never before given in the school; or a cutting from a recent gift-book not known to other pupils. The teacher needs a fund of material on which to draw, and the inexperienced teacher should at once begin a card-catalogue or a note-book of sources of materials suited to children of this age; within three years he will have a rich collection and an entirely new set of pupils to use it.

The teacher's problem is to make everybody talk by giving each something worth while to say, and by making the situation such that the child feels it is worth while to say this something in the very best way he can.

Criticism should be only what will definitely help the child. Mere faultfinding will kill spontaneity; however, more people are, like Ben in "Jean Mitchell's School," eager for adverse criticism than we suspect, and no teacher may salve his conscience by feeling that he is kind to the pupil when he withholds necessary criticism for which the child is ready.

Games and drills to correct errors of grammar, pronunciation, and enunciation, are as effective here as in lower grades, if selected to suit the pupils.

Reciting from memory a few fine models of English will do much to improve both oral and written composition. Lincoln's Gettysburg Address is one fine model, and Mary S. R. Andrews's "The Perfect Tribute," read to the pupils, helps them to see that clear and direct speech in simple words, with a message behind those words, becomes more effective than even Edward Everett's polished phrases. It helps each pupil to feel that he can be himself; that if long words, discriminately selected, are to his taste, he should use them; if not, he may study to be concise and clear with the best-chosen short words that he can find. Both sorts of talking and of writing are needed in the world.

Writing.—The written work demanded by all lessons in seventh and eighth grades gives teachers ample opportunity to check students on spelling, penmanship, paragraphing, punctuation, and sentence-structure required to date, and to see that pupils hold themselves responsible for using all that they have learned. It is important enough to repeat: No work below the child's best ability should be accepted; slovenly work should be redone; if he is pushed in some lines, he would better be entirely excused from others than permitted to do careless work and have that accepted.

In attacking the problem of how to study,—that is, how to resolve a situation without waste of time or energy,—pupils continue

the work of organizing begun in sixth grade, and learn in addition how to check results, how to solve the problem in a new way, and how to apply old knowledge to new situations. Much of the history work may be conducted through what is called the "problem" method; the industrial and geography work are full of "projects"; arithmetic processes grow out of life situations and incite children to ingenuity and logical procedure in their execution; and all lessons give opportunity for "topical recitations," many of which need to be reduced to writing for use in note-books, for reviews, or for other purposes. Good paragraphing, outlining, and other means of keeping pupils to the point, thus receive necessary drill.

In the upper grades, written and oral language are more nearly alike than they have been before or are likely to be in adult life, except in the case of real authors, for, during the adolescent age, children often confide to a diary or write to a confidential friend what they feel could never be told face to face—emotions, ambitions, self-depreciation or conceit, poetical effusions, admirations, and the "hopes and fears of all the years" to come. As said above, children begin to feel themselves different from others, so that less class-work and more individual criticism become necessary in upper-grade language. Considerable class-work is, however, possible, when wisely guided. (See pp. 252–258 for some suggestions.) Children seek great variety in expression, and are often crude or extravagant, (note "freeze your young blood," on p. 257;) but tactful criticism (or at times the ignoring) of children's original work will lead to later self criticism and correction of crudities and absurd exaggerations.

Children write for some audience, and so should still wish to interest that audience and to *hold* the attention. The means of learning to do so can become a class exercise, though the final compositions may be written for the teacher alone and not for public reading. A teacher must be fertile in finding motives or problems, and will need many books on the subject—not to be followed, but to give some suggestions of either topic or method.

The different methods of paragraph development may, in very simple form, be utilized to satisfy the children's craving for variety. (See any good rhetoric.) Casting some thought into poetical form will also meet the demand for variety, and at the same time help vocabulary, since rhyme, rhythm, and meter, all limit the word-selection.

Sentence structure must be continually bettered, and many teachers find that a little technical grammar on clauses and con-

nectives is an aid here. At any rate, "definite work for each variety of the complex sentence must be done in turn: clauses of time introduced through a narrative demanding them; clauses of place through description demanding correlation in space; clauses of cause, manner, degree, concession, and so on, in like manner, through the pressure of a subject-matter exacting them. Most of the constructions of the simple sentence will evolve along with these. The pressure must never be for a given form, but always for the expression of an idea which finds that form useful. Thus every set of lessons will develop not the one form aimed at, but a group of parallel constructions interchangeably useful in expressing the sort of thought-relationship needed. The compound sentence should be attacked through its adversative form; begun by sharpening the child's sense of contrast, and rousing his perception of the contradictory elements in things about him. The same method may be used to exercise him in compounding sentences copulatively, causally, and alternatively.

"Continual work in sentence response should aim to give the child instinctive skill in adapting his form to his thought. Its object is flexibility; it seeks to render the forms in his possession mobile and swiftly obedient. A sentence containing two clearly marked ideas may be selected, for instance, and the idea separated by class-work and vivified and accurately defined by class discussion. Then the children may be set the task of writing sentences in which one idea seizes the mind, the other being present but subordinate. If the pupils know at once which idea is the emphatic one, the sentence is a success; otherwise not. The earliest work in this line may be marked by extravagance, but increased skill will soon form a more restrained taste."* (See illustrations, pp. 255-258.)

Errors in *spelling* must continue to be conquered as fast as they arise. At least four-fifths of all necessary words should, by this grade, be "first nature" to the child, and a ready use of the dictionary should make the looking up of the unusual words easy and certain. (See sixth-grade suggestions, and pp. 98-104.)

Penmanship must still receive, at definite times on the weekly, if not daily, program, enough attention to insure no loss of skill already gained, and some advancement in either form, speed, or grace, as needed by individuals. Legibility and beauty of form (including slant and spacing) must not be sacrificed by too-much-required and too-hurried writing. Either the amount of writing required must be reduced, or pupils must have more practice in

* *Winona Normal Bulletin*, March, 1907, (out of print).

securing speed. * Probably 75 to 85 letters a minute of the desired standard selected would fit the pupils' needs.

What to expect of seventh-grade pupils.—Ability to gather from listening (or reading) the main points of a good talk, and later from memory to set these points down in outline form, with some of the subordinate ideas properly located.

Ability to criticise one's own work because of the possession of definite standards: (1) Do I really say anything? (2) Am I clear, or coherent? (3) Do I make an interesting beginning; that is, would people listen to me? (4) Do I keep up the interest, or do I grow commonplace, not holding my audience? If so, why do I? Are my ideas not clearly differentiated? Are my sentences monotonous? If so, how can I vary them? Haven't I chosen my words consistently? (5) (If written) Is my penmanship easily readable? (6) Does my paragraphing show the changes in ideas that I wish to express? (7) Does my punctuation help the reader? (8) Have I spelled all my words correctly? (If in any doubt the dictionary should be used.)

Ability to judge the worth of another's work and to offer helpful criticism on at least one point. (Why good, bad, or indifferent.)

Ready use of the dictionary.

Penmanship and spelling, of standards indicated above.

GRADE VIII.

Teachers should read with care the work prescribed for all grades below the eighth, for unless that has been accomplished, the teacher must go back far enough to meet the children's needs and do that work well, even if it be of only fourth-grade standard. To attempt eighth-grade work without the sure foundation of what has preceded is waste of time—time that might better be spent in doing the work outlined in some grade below so thoroughly that the next teacher has a good starting-point. Many causes may operate against eighth-grade pupils' being up to grade: (1) there has been no state standard before, and pupils will vary according to the ideals of their teachers; (2) many are foreigners and find English almost impossible; (3) many have not been guided through the self-conscious age and find extra difficulty in beginning to be free of speech or pen in the eighth grade. Therefore it is that teachers should be ready to teach whatever is needed, not bemoaning the fact that the minimum standard set cannot now be reached, for this standard is set for those who have had all preceding work. Results in life everywhere must be judged by a double standard: *first*, by a set scale; *second*, by the causes which produced the given

result. So every language effort must be doubly judged; according to language standards the result may be "poor"; but judged by previous training, mental ability, foreign vocabulary, self-consciousness, etc., it may be "superior." No eighth-grade teacher should condemn his own results because they do not reach some printed scale until he has honestly faced the causes which produced the result. If he knows that he has done his best for each individual in his group, he has no reason for anxiety.

The only wholly new feature of eighth-grade composition work is that of working for the last factor in the producing of an interesting theme—that is, securing reaction from the listeners. Repeating what has been given before, there are just two things required of every good author, whether speaker or writer: (1) He must have a message worth giving, either for entertainment or instruction; (2) he must tell it interestingly. To do this, (*a*) he must, after having chosen a pleasing point to give, make a good beginning so as to catch the attention of his audience; (*b*) he must have the organization so clear as to be easily followed, so that he may hold his audience; and (*c*) he must illustrate, summarize, apply, be sufficiently accurate, show reserve power and insight, or in some other way stimulate the hearers to further interest in the subject, so that they want to do something about it—hear it again; tell a similar anecdote; examine the object; try to make the article; read more about the subject; practice it in daily life; go away criticizing the talk, agreeing, disagreeing, debating about it, etc.; offer service or money if the talk is in some charitable cause; cry or laugh; or remain spellbound by the big thought, as the audience did at Lincoln's Gettysburg address.

It is this third point that must be given to eighth-grade students as a new motive for "finish" in organization, in vocabulary, and in sentence structure. It is not a power to be fully attained in one year, nor even in the succeeding four years of high school. Many speakers never acquire it, but we go away from hearing such lecturers unmoved, turning to chat with our companions about other topics, the talk having proverbially "gone into one ear and out of the other." Though it may take a lifetime to acquire, it is well worth working for, and eighth-grade pupils should *begin* to look for it in all they hear, say, and write.

Listening.—(See suggestions for earlier grades.) Pupils listen to good literature; to one another's recitations, talks, stories, etc.; to as many outside speakers as possible—ministers, lecturers, demonstrators, agents, political leaders, vocational experts, prominent citizens, debaters, etc. Through the eye, they listen to all

forms of good writing as found in books, magazines, and newspapers. The resourceful eighth-grade teacher will find numerous fine men and women in the community who will gladly give ten minute talks on their different occupations and what pupils should be learning in preparation for each; why it is good to be a merchant, a baker, a carpenter, etc.; or what lessons life has taught that these boys and girls can learn now under a teacher's guidance. There is no limit to the field; but the teacher must of course set a limit. Talks must fit the pupils' needs. There must be no more than can be well digested. The teacher must be sure of what the speaker will say, and should therefore not invite people at random, but should at least begin with people big enough to understand the need of the talk's being a "model" of its kind, and hence big enough to let the teacher hear it and suggest changes to make it fit the standards known to pupils. The teacher cannot afford to invite a man who says that he doesn't know what he is to talk about, who rambles on awhile, and then talks twice as long as the time allowed. He must invite someone who is willing to give thought to the subject and show plainly that he does know what he is to talk about. "Special days" open the door to talks on great men, on pictures, on literature, on industries, on peace and war, and our country's soldiers—soldiers in the daily battle for pure food, sanitation, and honest work, as well as soldiers on our battle-fields.

Pupils should be questioned after each talk on why they liked it as a whole, what parts especially pleased them, what it made them feel, what they wanted (or still want) to do: Was it pleasing mainly because of the thought? The expression? Or both? Was the thought new, or was it an old idea treated in a new way? Was it logically developed, easy to follow? Did the speaker make his point? Did he stick to his point? Did he stop when he was through? Was it worth telling? Did he choose interesting details? Were they consistently subordinated, or did they detract from the essentials? Did the expression fit the thought? Was the vocabulary well chosen? (See Shryock's discussion, in his English Reader, of Webster's vocabulary.) What figures of speech were especially good?

Stories of great men, the growth of great industries, and the execution of great enterprises, appeal to eighth-grade pupils. About two years ago one of the popular magazines contained a series of articles about men who earn \$100,000 salaries, each article showing plainly how the sum was truly earned; in July, 1916, a Chicago Sunday paper gave the life of Mr. and Mrs. James J. Hill, of St. Paul, showing how much both deserved the success they

attained. Such articles are worth while for children to hear and read, to counterbalance a false notion that success is "just luck," and to teach that success is the result of hard work. When they read of how Franklin and Robert Louis Stevenson learned by patient practice to write, and how Stevenson wrote and rewrote even his later books many, many times before he let them leave his desk, pupils more willingly work to listen, to speak, and to write satisfactorily. Selected "Lives" from Plutarch, Shakespeare's "Julius Caesar," and certain books by Dickens, Scott, George Eliot, Warner, Hawthorne, and Irving appeal. If, for any reason, pupils are not ready for these, the teacher should study lower-grade lists and select books that can be "listened to" (through the eye) with pleasure enough to induce the reading habit. The graver danger, however, is that we let our pupils read too easy matter until they form lazy habits in reading and in listening, desiring just headlines or "movies," not willingly delving for the gold in real literature.

. *Talking*.—If a member of the class tells how to make a cement-walk, a boat, or a derrick; how to make a Pilgrim cap for the girls to wear at the Thanksgiving festival; or how to prepare some confection to be served to the visitors on that day, the speaker's aim should be to make every one who listens desire to make the article. The teacher can often foster the execution of this desire by offering cloth or patterns or recipes to be taken home; or by putting the talk just before a manual-training or cooking period, when pupils may request the privilege of making the articles; or the talk can come just at school close so that children go home with the desire to try the recipe fresh in mind. One great factor in the educative process is the testing of ideas and emotions by *doing*. Desires that remain passive do not build character; hence teachers and parents should coöperate wherever possible, or each must try alone if coöperation isn't possible, to secure action as a result of stirred interest. *Wishing* to make something, wishing to be as kind or as brave as was the boy in the story, never produced the object, nor the kindness, nor the courage. Every incitation to action should have a planned outlet, or should carry with it a challenge to the child to find a method of application or of execution. When the habit of *doing what one knows he should do* is formed, the openings for execution need no longer be pointed out.

Speaking and writing go hand in hand, so that much said under one head may be made to fit with the other. To avoid repetition, more which might well be said here will be put under the next topic.

Writing.—The extravagances in vocabulary, in high-sounding sentences, in opinions, so prominent in seventh grade, begin to tone down as eighth-grade pupils realize their approaching dignity. Vocabulary is selected for better purposes than to display individuality. If given good copy and good methods of work, children begin consciously to imitate different “styles” which they admire. True, the dignity of dawning adulthood is often at variance with the still-existing childish emotions; so that inconsistencies must often be ignored by the teacher. The youth fears the world’s criticisms, yet at times is daring and bold. With Longfellow in his “*Morituri Salutamus*,” the teacher needs to feel, even if he doesn’t say:

How beautiful is youth! how bright it gleams
 With its illusions, aspirations, dreams!
 Book of Beginnings, Story without End,
 Each maid a heroine, and each man a friend!
 Aladdin’s Lamp; and Fortunatus’ Purse,
 That holds the treasures of the universe!
 All possibilities are in its hands;
 No danger daunts it, and no foe withstands.

* * * * *

“Be bold! be bold!

Be not too bold! Yet better the excess
 Than the defect; better the more than less!”

In other words, the teacher must keep alive, or rekindle, a spirit of freedom in self expression.*

Early in the year, the teacher must deliberately work to inspire confidence in pupils, to create an atmosphere of good-feeling, and to engender comradeship between teacher and pupils, as a basis for the freedom of expression desired. Of course, as in other grades, the subject-matter must be of interest to pupils and worth while talking or writing about. There are two main types of work possible: *First*, “Big units,” demanding coöperation or team work, such as the writing up of a school party, planning and giving a program for visitors, dramatizing a book, or preparing and binding books containing a chapter from each child. For such work, the following topics have been found especially good: *World Builders*, such as Bridge Builders and Miners; *Heroic Workers*—“Life-Saving Service,” “Red-Cross Work,” “History of Minnesota,” “The Lost Colony,” “First Aid to the Injured.” (See pp. 258–261 for one illustration.) The *Second* type of work is more individual, dealing with personal experiences in travel, camping, Saturday work, vacation work, a visit paid, etc.

* To Miss E. Catherine Burkholder, whose work the writer has had most opportunity to watch during the last few years, and to her able predecessors, the writer is indebted for the following illustrations and methods of work. Much of what follows is taken from Miss Burkholder’s talks to students.

Both types run throughout the year, alternating as necessary, but the individual type does and should predominate early in the year when the teacher is quietly proving his trustworthiness as a recipient of oral or written personalities or confidences. The teacher may to himself call these lessons "get acquainted" lessons, since he is, through them, learning individual abilities and needs. "Home study," freely discussed in class, as to sorts, amount, conveniences for, etc., makes a good beginning essay. This may be followed by "My study program," in which each child expresses himself freely as he arranges his school (and home) study hours to secure the best results for him. Children's opinions must be respected by the teacher, but if poor judgment is shown, the teacher may later guide the pupil in making changes in his program. "School Management" discussed, and then written about, may be the entering wedge to coöperation.—What makes good government? Who should be most considered, the individual or the group? What consideration is due our neighbors? How can we better the passing of classes? Cloak-room order? Who should assume the responsibility when the teacher is away from the room? and the like. The teacher must avoid expressing an opinion, must encourage perfect frankness, and, in the criticisms of the papers, must make few adverse criticisms, and call no attention to individual opinions, but say (what is true): "I enjoyed your papers very much. You seem to agree that thus and so may be done. Let us try the plan." After two or three weeks, the teacher, in the meantime reading some autobiographies, as of Franklin and Grant, may suggest that pupils write their autobiographies. This must not be attempted until the teacher feels that pupils trust him as a sympathetic reader and a safe confidant. If the essays prove that the children are frank, the teacher may suggest, "Now you've told me about the past, (and I found the stories most interesting,) how would you like to look ahead about five years, when you have probably finished high school, and tell me of your wishes or your plans? You may call your stories, 'My Wish,' 'The Future,' 'Looking Forward,' or any title that you feel fits what you write." If the children feel free to write, they will do their best, and, through these means, (and others that ingenious teachers will devise,) the teacher learns what he so needs to know: the children's home conditions, their ideals, their future hopes, and, incidentally, the mechanical errors needing class attention. Since the most of two months will have been occupied with these "get-acquainted" lessons, the nearness to October 31 will make the consideration of a Hallowe'en party, or a program, or a book of Hallowe'en incidents

(real or imaginary), or of ghost stories, a fine subject for the first coöperative effort. Specific drills on needed mechanics, followed at once by opportunities to apply the knowledge, so that much practice in writing is secured through strong motives or interests, will soon eradicate the majority of errors. By the time this is accomplished, pupils are ready for individual criticisms from teacher and classmates.

Vocational guidance has a large place in the work of any eighth-grade teacher, and pupils' individual interests will control the teacher's selection of literature to read and topics to assign for composition work. (See reference list, pp. 300-302.)

The teacher is also needed to help pupils realize that their ideals will work in daily living, if only correct means are used. (A few adult "croakers" to the contrary!) As the President said in his Philadelphia speech to our immigrants, "You dreamed dreams of what America was to be, and I hope you brought the dreams with you. No man who does not see visions will ever realize any high hope or undertake any high enterprise, and just because you brought the dreams with you, America is more likely to realize dreams such as you brought. You are enriching us if you come expecting us to be better than we are." What he further said may be thus adapted to our boys and girls: The constant addition of youth to the world is meant to better the ideals of men, to make them see finer things than they have seen before, to get rid of the things that divide, and to make sure of the things that unite. No doubt you will be disappointed in some things, no doubt many things you find in the world will not seem to be touched for you with the complete beauty of the ideal which you now conceive; but remember your mission is to help forward—never to renounce your ideals; though they may not seem to be working, they will be. Good is bound to overcome evil; "Life is ever lord of Death, and Love can never lose its own."

Kenneth Graham's "Dream Days," and "A Golden Age," will help children, who can appreciatingly look back a year or two into their lives, to see how a given act appears in two lights to children and to adults.

Opportunity should be given for the writing of poetry as well as prose, and of puns, riddles, conundrums, limericks, and jokes.

No new features of "mechanics" will be demanded, but all given before should be constantly applied, and pupils should themselves be held for putting into good shape all manuscript "handed in." The mechanics will naturally be motivated more largely than before by the subject-matter or the purpose of the composition,

whether, for example, the work is to appear in a school paper, or a real newspaper; to be given at a school assembly, or to be used in the annual exhibit.

Since the children's good *handwriting*, laboriously acquired, must not be permitted to grow poor, and since there will necessarily be heavy demands on students for rapid and much writing in connection with note taking upon talks heard and reference-books consulted, the teacher may do well to suggest some sort of conventionalized abbreviations or "shorthand" for note-taking. Any system can be used; the one given is only suggestive of what may be done: *wh* for *which*, *wh^l* for *while*, *whⁿ* for *when*; *look^s*, *ask^s*, etc., for the progressive form of verbs, and *look^d*, *ask^d*, etc., for past forms. The principle is, of course, to select characteristic letters after the beginning is clear: Compare *rev^{l^{ain}}* (revelation) and *rev^{l^{utn}}* (revolution). Children may also use abbreviations from their dictionary study: *e. g.*, *cf*, *i. e.*, *ibid*, *ditto*, etc.; and may even use mathematical symbols for abbreviations, such as = to mean *alike* or *the same*, \therefore for *hence* or *therefore*, > or < for *greater*, *less*, *more important than*, or *less important than*; figures instead of spelled-out numbers; and two short vertical lines for the word *parallel*. For fear this may interfere with spelling, the words should be written in full in all transcribed notes, and pupils should know that all numbers must be spelled out in an essay or in the body of a letter. The *penmanship* should be rapid enough to permit the execution per minute of from 85 to 95 letters of good quality. (Use system or scale of penmanship adopted in the school. See pp. 292-295, for scales and references.)

Spelling and *dictionary work* as before indicated should be kept up. Some teachers advocate the organization of only spelling or penmanship "hospital" classes, omitting these subjects for all but pupils who need them. Certainly if in all daily work pupils show themselves up to grade they may forego practice whenever the school management makes this feasible. (See pp. 98-104.)

Grammar, introduced either as an aid to better thinking and talking or as a separate English subject, is almost universally taught in eighth grade, and often in seventh or even in sixth grade. (See separate treatment below.)

What should be expected by the end of the eighth grade.—In *listening*, ability to gather the gist of a talk, and, if the talk is well organized, ability to name the leading points and not be carried away by some incident, even if clean and pleasing, told either to rest the audience or to illustrate a large point; to recognize a fair amount of apt phrasing, pleasing sentence structure, and pertinent

metaphors, similes, and metonomies. In *reading*, (listening with the eye,) to be able to (1) carry a point through a fairly lengthy article; (2) know whether the point was consistently sustained, or whether the position was shifted; and (3) whether details were pertinent or whether incongruities crept in. In *speaking*, to stand well, use good tones and clear enunciation, say something worth while on a subject suited to eighth-grade pupils' interests and abilities, and say it so that a willing audience can follow the speaker and gather the thought. Above this as a minimum, many pupils can attract, hold, and secure reaction, from their audience. In *writing*, pupils should show ability equal to that required in oral work, including such control of the mechanics of written work as not to hinder their free expression nor the reader's correct interpretation of the thought. At least 97% of all words used should be correctly spelled, though some may still have to be looked up in the dictionary.

GRAMMAR

In carrying out the policy of the Minnesota Committee on Elimination, grammar is not separately outlined before the eighth grade, though grammatical terms are not excluded from any grade where they will help the child to talk about his work or to understand the teacher's criticisms. The work to be accomplished is definitely stated in that report, and is repeated below:

The records show that the great majority of children in the Elementary Schools never go beyond them, and when we teach grammar therein it should be with a motive suited to this condition. With these young students grammar should be studied for the purpose of enabling them to understand the constructions of the language they hear, read, and speak, and also to speak and write it with accuracy and fluency. That is about all a youth of fourteen or fifteen can accomplish. Technical grammar as a science, or an exercise in logic, has no place in the grades.

The committee therefore recommends that Grammar, as such, should not be studied below the seventh grade and preferably not below the eighth grade.

In order that children may pass freely from school to school, and all take the same state examination, the first requisite is that all texts on grammar should use the same terms to express the same ideas and relations. Each writer should not be permitted to invent terms at will.

This committee recommends the adoption and use in this state of a single uniform grammatical terminology. It further recommends the use of the terminology recommended to and adopted by the National Education Association at its Salt Lake Meeting, so far as it is practicable to do so.

But as the report provides for a very extended study of grammar, while this committee, at this time, is recommending a minimum course for the elementary schools and for the state examinations, we would suggest that, while following the above report, we limit the amount of work to the following:

The eight parts of speech.

1. Nouns: (a) In general, no distinctions as to kinds except common and proper.
(b) Two case forms: Common and genitive.
2. Pronouns: (a) Personal, relative.
(b) Person, gender, number, and cases.
(Note: Case not always distinguished by form.)
3. Adjectives: (a) Degree.
4. Verbs: (a) Kinds: Transitive, intransitive.
(b) Conjugation: regular, irregular; but not to be learned apart from the study of sentences and selections.
(c) Person: first, second, third, with personal subjects. Impersonal.
(d) Number: Singular, plural.
(e) Voice: Active, passive.
(f) Mood: Indicative and imperative only.
(g) Non-modal forms: simple infinitives and participles.
(h) Tense: All.
5. Prepositions.
6. Conjunctions.
7. Adverbs.
8. Interjections.

The Sentence.

- Kind—Simple, complex, compound.
Declarative, interrogative.
- Subject—Simple, compound.
Complete subject, subject substantive.
- Predicate—Simple, compound.
Complete predicate, predicate verb.
- Clauses—Principal, subordinate.
- Use of clauses—Substantive, adjective, adverbial.
- Phrases—Substantive, adjective, adverbial.

Nothing, however, about *methods of teaching* grammar was there mentioned, and, since modern methods depart widely from older methods, space should unquestionably be given the subject. For at least eight years, the English department* and the upper-grade teachers of the elementary school at Winona† have united in working out methods of teaching what grammar seemed needed to seventh- and eighth-grade pupils by “inductive” or “thought” methods. Such methods have been tried elsewhere in the United States, and very widely in some foreign countries, but since the writer knows the Winona plans best, she asks the liberty of giving them, in preference to others, to the teachers of the state.

The basis of the work, to be kept in mind by the teacher, and only gradually made known to pupils, is given below:‡

- A. Sentences are composed of elements called ideas.
- B. These ideas are of three kinds—
 1. Substantive ideas. 2. Attribute ideas. 3. Relation ideas.
- C. These three kinds of ideas are expressed by three kinds of words or groups of words—
 1. Substantive words. 2. Attribute words. 3. Relation words.
- D. There are three ideas in the thought, the first being always substantive, the second either substantive or attribute, and the third the relation between them.

* Mrs. C. B. Chorpenning, leader.

† Misses Saunders, Storie, Burkholder, and their assistants.

‡ The remainder of the discussion is taken almost bodily from the *Winona Normal Bulletin*, March, 1916.

- E. The thought is expressed by a sentence which uses substantive words, attribute words, and relation words, (or groups of words in each case,) to stand for the ideas involved.
- F. Words or groups of words, representing ideas, and called modifiers, may change or limit the meaning of other words or groups of words representing other ideas.

The real grammar work begins when the children are old enough to consider logically the work of the sentence as the vehicle of a thought; and this work is continued consistently until, through the breaking up of the thought into ideas, and of the sentence into words which express the ideas, the child has been forced, by his own thinking, back and back, through the ideas and the words, to the parts of speech and their variations.

Sentence Elements.

Through the actual inspection of sentences, and the attempt to find what these sentences arouse in his own mind, the pupil's attention becomes directed to the elements of the sentence. When asked what he finds in his own mind as a result of scrutinizing the sentences, he is sure at an early stage to refer to certain mental images or "pictures." What he has really found is an *idea*, for he has not only found his "picture," but he has also put meaning into the picture. To talk about putting in meaning would probably only confuse him, and he is allowed to ignore this difference and to call the elements that he finds "images" or "mental pictures." When he has a little more experience with these elements, he is told that they are ideas; but the fact of their being images plus meanings is not forced upon him, since there seems to be no particular value in insisting upon this fact at this point.

When the term "idea" means something to him—when he can isolate and in a small degree examine these elements of his mental content—he is led to distinguish between the idea and the word or group of words which expresses the idea. Then he is led to the discovery that there are different kinds of ideas in a sentence, expressed by different kinds of words. He finds that there are some ideas upon which his mind can focus—ideas upon which his mind can rest as the ear rests upon the dominant note of a scale. Such ideas are book, man, flower, etc. He finds other ideas in the same sentences which cause his mind to be vaguely uneasy until it finds something to which the ideas should be attached. "Black," for example, is such an idea. The mind persistently asks, "Black?" "Black what?" This tendency to search is comparable to the call which the ear makes when it hears the leading tone "fah," and is not satisfied until it traces it into the tone to which it leads. Then

there is a third class of ideas which stand *between* two other ideas. They produce the feeling of being *between* ideas even when the other ideas are not expressed, and they carry the mind out in two directions, as does the idea "in." The pupil is led to notice the response of his mind to the idea. He finds himself saying, "In?—Yes; something is *in* something." Thus the three kinds of ideas are made clear through the pupil's attention to his own mental content.

Care is also taken immediately to show that these ideas are not always expressed in single words alone. The possibility of needing a *group of words* for a single idea, is emphasized at this point to the degree which seems wise, and reëmphasized a little later in connection with the three ideas of a thought, and the discussion of modifiers.

As soon, however, as the three typical kinds of ideas are discriminated, the names are logically called for by the pupil, and they are at once given. As soon as the pupil begins to use the terms substantive, attribute, and relation, as names for the type ideas, he is led to form a definition of each of these ideas and of the word or words which express the idea. A *substantive* idea is an idea upon which the mind can rest; it is expressed by a substantive word or group of words. An *attribute* idea is an idea that refers the mind in one direction; it is expressed by an attribute word or words. A *relation* idea is an idea that refers the mind in two directions; it is expressed by a relation word or words.

Just how far children should be required to go in distinguishing between the substantive *idea* and the substantive *word* which expresses the idea,—just how far they should go in distinguishing the thought from the sentence which expresses the thought,—is difficult to determine. The child should realize that the symbols are only the means of expressing the thought or the idea which lies back of the symbol. If it is reasonably certain that he could translate the symbol into the content if called upon to do so, then it is reasonably safe to allow him to deal with the symbol without always referring to the content back of it. So he may talk about a substantive written on the blackboard without always stopping to explain that he means a substantive word and not a substantive idea; and he may talk about the sentence as the unit of thought without always stopping to explain that he means that the sentence is not the thought, but merely expresses the thought.

If the problem of mixed ideas arises, just enough is done with it to make it possible to disregard the presence of such ideas when they are found in the sentences analyzed. The children are given a brief explanation, and then are asked to defer this phase of the

work until later. The consideration of a few such ideas aids clarity of thought by showing that an idea may belong to more than one class at the same time. This is especially helpful in discussing transitive verbs. The *main* function of the idea, however, may be used as the criterion as to what it is in the particular case, and the mixed nature of the idea relatively ignored. In determining the true nature of ideas it is pointed out that a substantive may be described through its attributes and relations; and that an attribute may be proved by showing to what substantive it belongs.

Function of Each Sentence Element.

The study so far will have been about *ideas* as recognized in sentences. The work now turns to the study of the sentence as the vehicle of thought, and it develops that every sentence must have the three kinds of ideas—no more and no less. Thinking is the relating of two ideas by means of a third idea; and the sentence is the expression of this relation. The most important substantive, the thing about which the sentence says something, is the subject; the second and third ideas taken together are the predicate. The second idea may be either a substantive or an attribute. If it is a substantive, it either identifies or classifies the subject. The distinction between identification and classification is believed to be fundamental, and the children give careful attention to the distinguishing of these relationships. They discover that the identification is reversible in thought, but that the classification is not; thus they get many sidelights upon their own thinking, including at least a slight view of the logical fallacy of the undistributed middle term.

The third idea in the sentence is found to be always a relation. In the use of the expressions, first, second, and third idea, it is made clear to the class that these words do not necessarily indicate the *order* in which the ideas occur in the sentence.

It is necessary also to make it clear very early that both the second and third ideas of a thought may be expressed in one word; as, "The horses run," "Flowers grow." This is done through a discussion of the *ideas* involved, and through showing that the one word fulfills the function of expressing both ideas. The children are allowed to think of "The horses run," as "The horses are running," and of "Flowers grow," as "Flowers are growing." This is in a sense not accurate, since idiomatic English has preëmpted these forms for another purpose, viz., that of the progressive form of the verb; but the inaccuracy is not harmful, and seems to have value in making the point clear.

After the three types of ideas can be recognized, either as single words or groups of words, and after it is clear that the first idea constitutes the subject of the sentence and the second and third ideas the predicate of the sentence, then the terms "complete subject," "subject substantive," "complete predicate," "predicate verb," and "modifier" are developed. A modifier is shown to be a word or group of words which changes the meaning of another word or group of words. The complete subject is the subject substantive with its modifiers. The complete predicate is the predicate verb with its modifiers. Modifiers are not at this point differentiated into adjective, adverbial, etc., but are designated merely as substantive, attribute, etc., awaiting the time when the more definite discussion of the parts of speech makes the more definite naming of modifiers possible.

There is also care to show that there are other relations than the main relation or third term of the sentence, and to see that pupils are able to distinguish between other relation ideas and this main relation. Little is done, however, at first, with the specific names of these other relations.

For drill, children are given ideas to analyze and to identify. They give one another ideas to analyze and to identify. They are given an analysis and asked to find an idea to fit it; as, "I feel vibration, see steam, and hear a roar," etc. They are given lists of attributes to see whether they can tell what substantives they make up. They contest to see who can find the most attributes in a ball, a lion, a peacock, a wheel, etc.; this is tested out also for relations. They try to find *one* attribute of a substantive which is so important that it determines the substantive; as speeding, melting, etc. They try to describe substantives in the fewest attributes and relations; in the process of this they play "20 questions, 10 attributes, and 10 relations," etc. Sentences are given in inverse order in order to drill the fact that the first idea of the sentence does not always come first in the sentence. In order that children may fix more definitely the fact that each idea is essential in the thought, they are asked such a question as, "Which idea in the thought is most essential?" Each child is helped to put into words what he feels about a given idea, and discussion is allowed to go on so long as what is being said seems to be profitable.

After it is certain that the class commands the problem of complex ideas expressed by more than one word, the two classes of complex ideas, phrases and clauses, are identified and named. A phrase is a group of words doing the work of a single part of speech, but not containing a subject or a predicate. A clause is a group of words doing the work of a single part of speech and containing a subject and a predicate.

The children then deal with clauses, and find that some are subordinate and some coördinate. They then take up the problem of complex and compound sentences, and arrive at the definitions of

such sentences. A simple sentence contains a subject and a predicate, with no subordinate thought in either. A complex sentence is the expression of one principal thought, and of one or more subordinate thoughts. A compound sentence consists of two or more clauses neither of which is a part of the other.

Parts of Speech.

The class next makes a more intensive study of the three kinds of ideas, and sees them break up into smaller units. They discover two kinds of substantive ideas and two kinds of substantive words. One substantive word *expresses* the idea, and the other only *represents* the idea. The first is a noun, the second is a pronoun.

They also find different kinds of attribute ideas, and come to know that an adjective is an attribute of a substantive; and that an adverb is an attribute of an attribute or of a relation.

Relations break up into (1) pure relations between the first and second terms of the thought (which relations are called linking verbs); (2) other pure relations called conjunctions; and (3) relations plus an attribute, (usually of location,) which relations are called prepositions. There are also found asserting words which contain both an attribute and a relation, and which are called attributive verbs.

Attributive verbs which are *incomplete*, in the sense that the attribute which the verb contains is in itself a relation and therefore sends the mind out after something to complete it, are transitive verbs. Attributive verbs which are *complete*, in the sense that the attribute involved does not send the mind out after something to complete it, are intransitive verbs, and are also called complete verbs.

Interjections are regarded as expressions of emotion not properly belonging to any term of the thought, and are dealt with along with such words as "the" and in some cases "that," etc., under the name of expletives or introductory words.

Participles, infinitives, and gerunds, have so much the appearance and functions of the adjectives and the nouns whose places they take, that they are dealt with in the main as adjectives and nouns, although later their real relation to the verb is made more clear.

Uses of the Parts of Speech.

After the various parts of speech are discriminated as has just been discussed, the *uses* of certain of them are very carefully considered. The uses of nouns dwelt upon are (1) subject, (2) predicate, (3) direct object, (4) indirect object, (5) appositive, (6) gen-

itive, (7) adjunct accusative. Partially at this point, and very definitely and carefully in grade eight,* the relation between these terms, and such terms as attribute complement, objective complement, etc., is made clear, so that when the pupil hears the latter terms (as he is sure to do in his later work) he will avoid the confusion which would surely come if he did not know the two terminologies.*

Four classes of nouns are recognized: (1) A common noun is a noun that may be applied to any individual of a class; (2) a proper noun is a noun that may be applied only to some particular person, place, or thing; (3) an abstract noun is a noun applied to names of actions, qualities, or states of mind considered apart from material things; (4) a collective noun is a noun that denotes a group considered as one.

The uses of pronouns are essentially the same as those of nouns.

Six *classes* of pronouns are recognized: (1) A personal pronoun is a pronoun which shows by its form whether it denotes the speaker, the one spoken to, or the one spoken of; (2) a genitive pronoun is a pronoun which denotes possession; (3) a demonstrative pronoun is a pronoun which is used to point out that to which it refers; (4) an interrogative pronoun is a pronoun by means of which a question is asked; (5) a relative pronoun is a pronoun that introduces a clause which it connects with an antecedent; (6) an indefinite pronoun is a pronoun which does not denote any particular thing or group of things.

Uses of the other parts of speech are simple, and are indicated in the definitions of such parts of speech. (Predicate-adjective will probably need to be dealt with separately.)

Two classes of adjectives are recognized: (1) A descriptive adjective is an adjective which expresses the kind or condition of a person or thing spoken of; (2) a limiting adjective is an adjective which does not express any idea of kind or condition, but which limits the idea conveyed by the noun. (The article is dealt with as an expletive, as previously indicated.)

Two classes of adverbs are recognized: (1) An interrogative adverb is an adverb used to introduce a question; (2) a relative adverb is an adverb used to introduce a subordinate clause.

The classes of verbs were of necessity indicated and defined in the discussion of the breaking up of relations into different parts of speech. Verbs are transitive or intransitive. Intransitive

* Since, at Winona, the study of grammar is begun at the middle of the seventh year, somewhat more can be done than when limited to eighth grade alone. Teachers may well note the complete "classifications" as quoted from the Winona course, but *should limit their work to suit the time spent upon the subject.*

verbs are linking or complete. Transitive verbs and complete verbs are attributive.

The main classes of conjunctions dealt with are coördinating and subordinating conjunctions, as they appear in the consideration of the compound and the complex sentence.

Prepositions and interjections are not divided into classes.

The matter of thinking cannot be hurried. At this point teachers must give ample drill to fix all new material, and the using of all old as well, before going on with modifications of the parts of speech and translation of the nomenclature used up to this time into the common nomenclature which many of the pupils will later need.

The translation into the more commonly used nomenclature is of course a temporary matter; and just as soon as the use of the nomenclature recommended by the Joint Committee on Grammatical Nomenclature, National Education Association, becomes general, this translation will be unnecessary.

Speech Inflections.

By this time the pupil has become acquainted with the three kinds of ideas,—with the three ideas in a thought,—and has seen the ideas break up into parts of speech which have various uses and classes. He has had it continually emphasized that the part of speech which a certain word is, in a given sentence, is determined by the function of the word in that particular sentence; and he realizes that a word may be one part of speech in one sentence, and another part of speech in another sentence. He now comes to see that differentiation in function is further indicated by a change in the form of a certain part of speech, which change in form comes because of variation in use in the sentence. Thus he is introduced to modifications of the parts of speech. He studies *case*, for example, at first in pronouns where the variation in form for subject, object, etc., is most noticeable. In later lessons he studies person, number and gender, and relates this knowledge to nouns in so far as it is applicable. The terminology of the joint report on nomenclature is followed as before.

The same general plan of procedure is carried out with the other parts of speech until the necessary command of modifications is obtained. Space does not permit a detailed statement of the whole matter, but enough has been indicated to show the general method of attack.

C.—READING.

Reading is that phase of English which helps one to obtain (and, in some situations, to share) the thoughts of others. It helps one

adjust himself to his three worlds: he secures material facts which aid him in his control of the physical world; he learns, through literature, how others live and act and think, provided he gets clear pictures from words and keeps actively receptive to new ideas and inspiring thoughts; he secures new experiences as he applies his own to each new situation; and so, as Hamilton W. Mabie says, "Breaks for himself his bondage to time, to place, and to narrow personal experiences." He can, in imagination, fight with Achilles, sail the main with Columbus, and wrestle all night on the mountain-top with Jacob's angel; he learns to know himself, and, through knowing himself, to know his fellows and his God. He reads books not to forget himself or life, but the better to understand life, and himself in that life.

In reading, as in language discussed above, there are three phases, only the first two of which will, however, appear in the outline for every grade. Those two are: (1) Silent reading, which is really "*listening*" with the eye—gathering conventional meanings from symbols seen over and over again; and, (2) oral reading, which corresponds to the imitative "*talking*," under language. The third stage may be either silent or oral, yet is distinct from the usual meaning of both, since it demands: initiative; power to interpret the thoughts read either to one's self, as in studying, or for others, as in reading artistically; ability to "read between the lines"; to gather deeper and richer meanings; to philosophize! Though there will be daily preparation for this stage in the lower grades, it can not be consciously worked for by the child until he has a comparatively rich experience, a highly developed imagination, an easy command of symbols (words, phrases, punctuation, etc.), and a ready emotional response. Some would attempt no interpretative reading in the grades, as, correspondingly, they would expect no original composition work there; but many others feel that one great function of the elementary school is to teach children to read so that they find in books the great lessons of life, so that they recognize which of their individual emotions are worthy and universal, as they see them expressed by an artist. Hamilton Wright Mabie's idea of "what it means to read well" may well be considered here. He says: "No book, however well written, is complete without a good reader; and good readers are almost as rare as good writers. Reading of the right sort is really a high order of talent. It may be cultivated, but with many people it is a gift. Shakespeare was a reader of genius, and his creative genius owed much to his marvelous faculty of reading, not only with his intelligence, but also with his imagination and his heart. To read a book with the mind only,

to comprehend the meaning of the words and pass on, is to leave the substance of a book untouched." * * * "First acquaintance with a book of power or beauty is an event in one's intellectual life. 'One may skim a book as a swallow skims through the air and leaves no trace of its flight; or one may build a nest in a book and make it one of the homes of the spirit in the brief summer of life.' The great works of imagination ought to be part of our lives as they were once of the very substance of the men who made them. You may read the play of 'Antony and Cleopatra' and get nothing from it but a series of brilliant pictures; or you may read it and add a large measure of Eastern and Roman life to your own life, and push back the horizons of your own experience so as to include these great and tragical workings out of human destiny under both eternal and historical conditions. This is what happens to true readers, and makes reading one of the greater joys of life. They not only escape from themselves, but they also *come into possession of themselves.*"

Therefore, in upper grades some attention will be given to "constructive reading."

In teaching upper-grade pupils "how to study," text-books will sometimes serve as reading material, but *literature* will, in the main, be the subject-matter used by all pupils in learning to read. Therefore it will not be handled as for literary interpretation, will not be analyzed in that way, but will be read for reading's sake,—selected because there is positive proof that pure literature makes the best subject-matter for use in studying the art of reading.

The mechanical side of reading will be helped by the usual aids (not ends in themselves)—phonics, punctuation, vocabulary study and other composition work, grammatical analysis, and voice work.

GRADE I.

To read the written thoughts of another demands two distinct powers on the part of the reader: (1) Basal experiences sufficient to give content or meaning to the words, coupled with an imaginative power which makes the symbolized experience real; and (2) power over symbols, or forms of words used to express ideas. To illustrate: (1) Though a comparatively young child might pronounce all the words in this first stanza of R. W. Emerson's "Brahma"—

"If the red slayer thinks he slays,
Or if the slain think he is slain,
They know not well the subtle ways
I keep, and pass, and turn again."

—he could never read it, for he lacks the necessary experience in

life to put any real content into the words; and (2) though an octogenarian with years of weather experience should attempt to read „Seute ist es sehr falt,“ he would find himself barred unless he knew the symbols.

Because the emphasis has been placed, by some, on the one essential, and, by others, on the second essential, two main methods of teaching reading have arisen. If one believes that emphasis upon symbol getting will quickest help the child both to know symbols and to put content into words, he will naturally use a symbol method. If, on the other hand, a teacher believes that basal experiences are more vital than symbols in the final interpretation of thought, he will employ a thought or experience method. Ardent advocates of the thought method do not deny that symbols must be known, and equally ardent supporters of a symbol method have their ultimate goal the interpretation, by the reader, of the symbols into thoughts. The real difference lies not in the rejection of either of the essentials of reading power, but in the point of view as to where the emphasis shall be placed.

That teachers who use thought methods resort to drills is sometimes counted against the method; but this is plainly unfair, since all agree that no matter what the means of presentation of a subject is, only practice will make the adjustment into a habit; the child who sees the carpenter use a saw gets the thought process at once, and even has a strong desire to use the tool, but it takes practice for him to secure good results and feel an absolute control of the tool. So with words—the tools of reading.

For years primary teachers have received in books and school magazines much help along the line of methods. Teachers will find advocates for all possible variations and combinations of the two fundamental methods, thought and symbol. Text-books and their accompanying manuals explain the different view-points of their authors, and since some teachers can succeed best with one plan and others do their best work in an almost opposite way, no one method should be entirely ruled out. It is, however, legitimate to say, that, in general, young and inexperienced teachers incline to the more formal or symbol methods, because progress in word recognition and word pronouncing seems easier to check than does growth in connotation; while teachers of wider experience and more professional insight tend to use thought methods, having found that thought work will motivate the acquisition of symbols very much better than acquisition of symbols can ever be made to motivate thoughtful reading.

Tests made by some English experts indicate that thought methods produce more intelligent and more fluent reading in less time to the page than do phonic or other symbol methods, even though these methods are used by capable teachers who enthusiastically support their own methods.*

Children are so eager to read that many learn as did Hugh Miller,† in spite of poor methods of teaching; and others, like Robert Louis Stevenson, discover a process of reading with no teaching. Children who read of their own accord get carried away by the thought and pay no attention to words which would get in the way of an adult reader. The type, the short sentences which virtually make paragraphs in the child's thinking, the happy illustrations in our modern primers and first-readers, together with the fact that, in general, the vocabulary used is already a part of the child's speaking equipment, and hence is possessed of rich content as soon as heard, tend to minimize the bad effects of symbol methods, and, by the results, seem to suggest that mere word calling is all that is necessary. Thought methods apply equally to word and sentence devices. Though full sentences are best for native-born children, the thought-word method has proved best for foreign children who are unacquainted with English idioms. Such children also need a large amount of motor activity to clarify and to clinch meanings of symbols for them.

Silent Reading.—This phase of the work should predominate during the first few months, if not throughout the entire first year. A child must not have too many problems to solve at once, and if he is laboring to get the thought from new symbols, he must not be expected at the same time to give it well to others. He may read out loud,—that is, with his lips,—but an observer readily sees that he is making lip and other movements merely as an aid to thought gathering, not with any idea of making these movements expressive.

NOTE:—Near the end of the year, a first grade was expected to entertain the other grades. They decided that the guests would enjoy some of their much-loved reading lessons, so they looked over all the texts used during the year and freely named their favorite stories. (Incidentally this proved an excellent review.) The entire list selected was of course impossible, so the children were called on to use judgment in narrowing the stories to the few that could be given in the allotted half hour. The guiding questions were: (1) Shall we have all reading or some reading and some dramatizing? (2) Shall we choose stories a great deal alike or quite different? Then, (3) which are best for dramatizing? For reading? After checking a number of tales similar in style, (4) which of these is the very best?

* Edmund J. Gillin, *Journal of Experimental Pedagogy*, Vol. 1, London 1911-12.

† See S. L. Arnold's *Reading: How to Teach It*. p. 46.

Then came the question of pleasing the audience: (1) By acting so plainly that every one could follow the story; or (2) by reading so clearly that every one could hear. The children realized that some couldn't be heard so distinctly as others, and that some didn't know their words so well as did others. All read and acted the different stories for several days, the children selecting those who would be likely to give the guests most pleasure. The representatives then read before their classmates for several more days, until the subject-matter was very familiar to all. Friday afternoon arrived. Several children showed more or less difficulty in adjusting themselves to an audience larger and different from their usual school-room one, but one child in particular became a striking example of self-forgetfulness. Selected because she read fluently, clearly, and appreciatively, she was given an entire story to read. In spite of her familiarity with the thought and the climax, after a few opening sentences which were expressively given, she became so engrossed in the story itself that gradually her tones grew lower and lower until she was scarcely heard by the nearest person. Audience was forgotten; self was forgotten. To all intents and purposes she was alone with her story and she was enjoying it to the full. On-lookers could see her lips moving, her eyes sparkling, her breathing showing her tense rapture, as she turned page after page. She finally reached the end of the story and with a long sigh of satisfaction over the outcome, walked to her seat, still unconscious of any audience.

Although Virginia failed to make her listeners get the thought, the whole situation was a wonderful compliment to the first-grade teacher,* since it showed that she had aroused a real love of reading; had selected texts that bore repetition with no loss of interest—real literature; had used thought methods; and yet had drilled sufficiently to give the child ready command of symbols.

Here was a case where a child already familiar with the symbols was still too engrossed with thought gathering to read expressively to others. How much less possible, then, would it be for a child not yet in command of the forms, to keep an audience in mind!

There must, of course, be some expression to show that the impression made has been correct; but the wise teacher secures this by other devices than just oral reading, such as: Doing the act, pointing to the object, telling the story, pantomiming, dramatizing, cutting paper, drawing, and modeling.

Recalling the two fundamentals in learning to read, the teacher asks herself, (1) How can I get the children to enter completely into the experiences portrayed in their reading? And, (2) How can I create a strong desire for mastering the symbols? These will be dealt with in turn.

There are two main sorts of experience to be lived: (1) That had daily by the children in their games, in their instinctive questionings, imitations, competitions, etc.; (2) that gained imaginatively. On both of these, the first-grade teacher can build reading lessons, arousing at the same time a feeling of need for symbols.

Reading lessons which are based on direct experience drop readily into the imperative-sentence form, a good method (but by no means

* Miss Helen Ford Staples, Winona.

the only one) for use during the first month of school. (See pp. 230-232, for an illustration of this plan.)

Imagined or indirect experiences form the basis for a second type of reading lessons. The teacher selects a unit of literature suited to the interests of the children. This she tells well. (If she isn't a good story teller, she must study the art from some of the numerous excellent texts now published on the subject—see Minnesota Library List.) The pupils reproduce it by several means—telling, picturing, dramatizing, paper-cutting, etc. When the story as a whole has been actually *lived* by the children, they are ready to read the story. The lesson may be on the blackboard (written, not printed, since the teacher's print is like neither script nor book print, and so makes a third form for the child to learn); or it may be printed on manila paper (with a hand printing-press, such as every primary teacher needs); or, best of all to the child, it may be in a book. (See pp. 232-237, for varied treatments of literature as the basis of the early reading lessons.)

To make pupils feel the need of learning the symbols, the teacher must make sure of three things:

1. That the words symbolize real content.
2. That this content is, by the child, recognized as valuable—as something worth his while to get, even at considerable self exertion.
 - a. Because his instinct of play, or curiosity, or imitation, or emulation, makes him want to "put on the soldier cap," "get the flag," "run to the cupboard," or "eat the apple."
 - b. Because he wants to be able to tell others what to do when he is "captain" and needs to say to one boy, "March," and, later, "Halt"; to all his soldiers, "In time; march. Right, left."
 - c. Because he knows that the mastery of these symbols will unlock for him great store-houses of literary treasures.

Miss Arnold, in "Reading: How to Teach It," suggests the plan of a teacher's reading a part of a story just before an intermission, stopping, with expressions of regret, at an interesting point, and saying, "If only you could read yourselves you could finish this, at noon!" What child wouldn't feel the challenge and determine that he would learn to read, and that without delay?

3. That the only possible way for the child to get this valuable content is by mastering the symbols. The teacher does not speak the words as she writes them, nor read a sentence every time she shows one. If she does, the child has little motive for getting the visual symbols; all he needs to do is to listen for the auditory symbols which he has been hearing for almost six years. Besides furthering close association of meaning with visual form by omitting sounds, the teacher uses many legitimate devices for securing the child's concentrated attention upon the form of the words as a means to some desired end. (Not as an end in itself, if she is using a thought method.)

Oral Reading.—In the usual sense of oral reading, that is, repeating expressively the author's exact words, little is done in first

grade. At certain times, and especially near the end of the year, the teacher may hold the children to the exact words, but at other times and earlier in the year, the exact words are less vital than the thought. Should a child be engrossed with the onward movement of the story, and say, "The fox ran into the *dark woods*" when the book says, "into the *lonely forest*," he would only have been translating the thought into more familiar terms to him, and should not be told of the change.

Adults do the same thing; why shouldn't children? When we meet a new word, we look up its meaning, and then, to get any content from the sentence, we find ourselves inserting each time we meet the word the synonym we know best until the content of the new word is ours; after that its own form can be used. A "lonely forest" to a child who is more familiar with the expression "woods," and who is lonely only in the dark, naturally becomes to him a "dark woods."

After pupils have acquired a love of reading and can think with the author with ease, the teacher may say, "That's what it *means*; but it isn't just what it *says*. See whether you can read what it *says*." Later, phonics will help the child distinguish "meadow," "pasture," and "field," though he may earlier have interchanged them without loss to the thought. Special lessons may be planned in which the "rule of the game" is to say exactly what the book says. The exact proportion of time on thought and on form must be carefully weighed to suit the needs of a class, so that neither lack of knowing form nor over emphasis on form may retard the reading.

Reading the author's words aloud should be preceded by plans which permit the children to show by action, by making, or telling, that they have silently gathered the correct thought. Take any imperative sentence lesson. As the teacher writes on the blackboard, or holds up a printed sentence, one child after the other does what is indicated. The teacher may then say, "Call on some one and tell him what to do, Jane." Each child may thus read orally a single command. Later, one child may act as "teacher" or "captain," reading several commands for classmates to execute. When dramatizing a literature lesson, the different children make sure they know what they are to say, and, at times, another child may read the descriptive parts, giving the actors their cues.

AIDS.—The language outlines for the grade, and pp. 228-230, which show the interrelation of the language arts, should be studied. *Phonics* should not be introduced until pupils have a fair sight vocabulary. Teachers differ individually as to what is a "fair" vocabulary and as to just what is meant by "phonics." There is space here for just a word. Experienced teachers who study results of different methods which they use, incline to post-

pone formal phonics to the second grade, but do employ in first grade incidental exercises which assist children in discriminating sounds and forms *in connection with the context*. They realize that children have to master an immense number of forms all at once, and so give them all possible cues, but are careful to drop all that have only temporary value as soon as children are ready for more permanent aids to independence in form mastery.

During the first fortnight, one teacher makes clever associations of form with meaning after this fashion: Since "pig" and "dog" are words of the same length and end in the same "curly-tail" way, we must look at the first letters to find in what ways these words are like the animals they name; a pig has his head down, with his nose rooting in the ground a good share of the time, while the dog carries his head up, and since the word "pig" begins with head down and "dog" with head up, you can easily remember them. When the new word "bread" is met, the teacher says, "You can remember that, for here is the loaf in the pan; see the sides of the pan [pointing to *b* and *d*] and the loaf inside it [pointing to *real*]." Cues of this sort should not be forced, and should not be recalled once, after pupils know the words without them. Gradually, a few initial sounds are taught, the teacher saying, for example, "What would be a sensible word to use here that begins as this word does?" (The teacher sounds the first letter of the new word.) [The initial consonants may be divided into four groups, according to difficulty of sounding them correctly: (1) l, m, n, r, s; (2) f, h, p, t, v; (3) c (hard), j, k; (4) b, d, g (hard). The remaining letters, q, w, x, y, z, are seldom needed in first grade, so are omitted from the four groups above. A word of caution may be necessary: care must be taken that children sound their consonants correctly, and not say, *ull* and *um* for *l* and *m*, or *buh*, *tuh*, and *puh*, for *b*, *t*, and *p*, etc. Teachers should spend necessary time in studying the introduction to the dictionary, where sounds are so carefully discussed, if they have the least doubt about the correctness of the sounds they are teaching. Though *b*, *d*, and *g*, are most difficult to sound clearly and correctly, they may be needed before some of the easier sounds. The teacher will, however, if possible, begin with the first group.]

Drills on sentences, phrases, and words become necessary, but, as indicated above, should be of a sort to associate form and meaning rather than to make form an end in itself. (See suggestions for drills, pp. 231-237 and 279-283.)

Seat-work can be made a most valuable aid to reading if selected (1) to fit the child's needs, interests, and ability to accomplish; (2) to give opportunity for many modes of expressing ideas—cutting, tearing, drawing, painting, making, etc.; (3) to teach ready discrimination in forms (not necessarily words); (4) to associate words and meanings; (5) to repeat work presented for the sake of fixing it. (See pp. 283 and 287-292, for seat-work suggestions.)

Texts.—(See p. 225 for method of selecting readers.) If the school is already provided with texts, the teacher needs to evaluate them carefully, classifying them into those dealing primarily with (1) form, and (2) literary material. She should next study the

vocabularies and literature of the different texts, so as to know how and when to use each, if all must be used. The child wanted to come to school to "learn to read"; that is, to be independent in gathering beloved stories told or read to him at home. The literature readers contain what satisfies this desire, and what will entice the child into richer fields. (See discussion, p. 16, on the sort of literature liked by six-year-olds.)

The "form" readers, if judiciously used, may serve as drill-books. Children love the idea of reading many books, and if like vocabularies appear in several, this can be done with advantage. During the early use of books, the teacher will often read parts which the child can't get, just as in language she helps out his fragmentary speech. Gradually the child, through much reading, picks up idiomatic expressions which have lost their old meaning and have taken on the nature of expletives, such for example as "How do you do?" "Once upon a time," "In a far away country," "Ever since," and "Once there was."

If only one or two readers are supplied, the teacher should ask for more. If the request can't be granted, the teacher must supplement book work by a large amount of blackboard and hectographed reading-material and by charts. (See pp. 233-234.)

What to expect by the end of the year.—Since more definite standards are being constantly made by students of the problem, the teacher should keep abreast of the times, giving such tests as she feels most truly representative of pupils' abilities. Educators have been chary about setting a standard for first-grade pupils, since children vary so greatly in their rate of progress, a slow beginner often surpassing one more rapid by the middle of the second year. Then, too, the irregular attendance of first-grade children (due to epidemics and other causes) produces great irregularity in a given class, all members of which may yet be ready for second grade in general maturity and ability. First-grade teachers should know what the standards are for second grade in the several lines: vocabulary control, rate of silent and of oral reading, ability to gather thought, and to pronounce words and sentences as well as to read expressively, and should do what they can in first grade towards such standards. (See pp. 292-295, for discussion of standard tests and their value.)

GRADE II.

Here the reading time must be divided between "intensive" and "extensive" reading. The large sight vocabulary naturally gained in first grade must be clinched, analyzed into "families" according to phonetic stems, and made a firm foundation for further growth

in vocabulary acquisition as well as in rapid or extensive reading; drills on local errors of enunciation (such as the sounds of *wh*, *th*, and *ing*) become necessary as another feature of "intensive" work. However, care must be taken that mechanics are not permitted to usurp any of the time due to real reading, since the early love of thought gathering, regardless of "verbal no-thoroughfares," must not be lost, but, on the other hand, must be conscientiously furthered by the teacher. The two sorts of work should occur in distinct periods, so that children gain no false notion that reading can ever be mere symbol sounding. Even different text-books may be used, the literature readers being used for real reading, and "method" readers being used for symbol study.

Silent Reading.—During this year pupils can read many books containing the same sort of literature as that read in first grade; the stories can be longer, however, and may forego much of the repetitive element needed before. It is not too early to encourage home reading which the teacher can influence. A school library should have plenty of easy books of the sort to form correct reading tastes; if the system is a large one, each teacher should select from the general library thirty to forty books for a room library—to be changed about once in three or four weeks; the teacher should influence pupils to read at home and report in school parts liked or things not understood. A record should be kept of the books read, and old favorites should be sprinkled among new selections month by month. A book that can't be read more than once isn't very valuable. Teachers should encourage the rereading of favorites, at the same time cultivating growing tastes.

Presuming that a second-grade teacher has two regular reading periods, aside from the time given to phonics, word drills, and seat-work, the major part of one of these periods should be devoted to the testing of children's power silently to gather thought and to picture vividly the experiences portrayed in the simple tales read.

Oral Reading.—More than in first grade, pupils should be held to reading the words of the book, whenever that is the problem of the hour. Of course in extensive reading, the drift, or gist, or sweep, of the story is what is wanted. To secure good expression, the teacher must, even in second grade, suggest motives that make the child want to do his best to make the audience understand him, hence to speak clearly, pronounce correctly, and show interest himself in the reading. Dramatization is a most effective means because the child readily sees the consequences of his failure, if he spoils or delays the play, or makes others get their parts wrong.

AIDS.—(See *language outline* for the grade.) *Seat-work* demanding the careful reading of blackboard or hectographed directions, besides giving practice in silent reading, encourages independence in all work. Many texts suited to the grade, like Miss Dopp's "Tree Dwellers," contain suggestions about "What to do" and "Things to think about." These can be used as models by the teacher, who can ask similar questions about other lessons. The work in *phonics* consists of: (1) Noting in a long list of words those that contain common elements; that is, selecting the common phonic stems. (2) Learning these "stems," "keys," or "phonograms." (3) Learning the consonant sounds most needed, both initial and final. (4) Learning the long and short vowel sounds, and to know these apart so that when the teacher says "short a" or "long i" the child can instantly give the desired sound. (Diacritical marks should not be learned unless necessary for the system of reading in vogue in a given school.) (5) Ability to *blend* known sounds. This is much harder than many adults realize, and needs special emphasis. (6) Learning to break words up into parts already known and to recognize whether the remaining parts are, or are not, able to be pronounced independently by the child. (7) Learning a few very simple rules of pronunciation of syllables. The making of little dictionaries and alphabet books will teach the alphabet in order.

Punctuation, as an aid in getting the meaning, must be noted. This will be mainly the final mark of a sentence and the capital at the beginning.

Word-drills will be necessary for securing fluency in both oral and silent reading, and for the sake of pronunciation and enunciation. In every community the teacher will find local errors to be corrected. If the children tend to monotonous expression, *expression drills* of various kinds must be resorted to. These can, however, never equal the spontaneous expression that comes from having the correct feeling, so should not be used except to supplement other means.

NOTE: One good scheme is to accumulate from daily lessons some especially interesting expressions demanding variation of tone, print these on good-sized cards (say 11x14 inches), and, if possible, find a picture to fit the expression. Another plan is to secure interesting pictures from magazines and elsewhere, get pupils to suggest what would naturally be said on seeing the picture, and select the best suggestions to be printed on the cards. These cards may then be used daily for expression drills, the monotones gradually imitating the enthusiastic readers, and so getting habits as well as ideals of voice variation. Though the pictures can't be shown here, they can be imagined; these are a few sentences found good for the purpose: (1) Kitty needs a nap, not milk. (2) Hurry, Hurry, John! We'll be late for school! (3) We had the loveliest time! (4) Oh, the pretty bird! (5) You can play with me. (6) My! such big horses! (7) My baby sister can play ball. (8) Pig, pig, do go over the stile.

Lesson plans found on pp. 230-241, for first and third grades may contain some suggestions for second-grade teachers.

What to expect by the end of the year.—Ability to read "successfully" both silently and orally the usual second-grade literature

and lessons, at the rate accepted as a standard. (See p. 292 for standards of "success" and "rate.") (See also language standards, page 24.) The number of books read depends on too many factors to permit a definite number to be named. It depends on (1) the general ability of the class; (2) the ability of the teacher (one teacher can make old material interesting no matter how frequently it is read, but cannot so surely get results from continual use of new material; other teachers do best with fresh material of about the same grade of difficulty); (3) the equipment of the school in the way of basal and supplementary material (whether in sets or in single copies from a library); (4) the aim of the work as voiced by superintendents, teachers, or the "standard tests" accepted for that community; (5) the relative value given to reading on the daily program; and (6) upon other less general factors.

GRADE III.

The well-done work of the first two years has given pupils power over visual symbols whose sounds and meanings were already well known; eye movements in reading have become habitual; and children have grown to love reading because of the fun, information, or entertainment, it furnishes. All this must be kept up by the third-grade teacher, who finds new problems besides in (1) a change of subject-matter, and (2) a consequent change in vocabulary. Although the children still enjoy home reading of cumulative tales, fairy stories, myths, and legends, they are eager for "true" stories, finding "Letters from a Cat," "Viking Tales," "Robinson Crusoe," "Tree Dwellers," "Seven Little Sisters," and colonial history stories, the types of literature which appeal most. These stories demand accuracy in word calling to make the meaning clear, and, since the vocabulary itself begins to be strange in sound as well as meaning, much work on *thinking* and on supplementing the text has to be done. To keep a proper balance between the necessary drill on the rapidly accumulating hard words and the onward movement in the story, exercises the wisest teacher's ingenuity. But that it can be done has been proved. (See p. 237 f, for some observed lessons from "Viking Tales.") Children have to be held to "thinking straight," to seeing definite situations, making sensible inferences, and concentrating attention on specific problems. This means that the teacher must plan questions for study which demand thinking to a purpose, picturing described situations, and many readings of the same material. She must also plan recitation questions to check the children on their execution of the assignment, and yet to secure progress in the story.

Silent Reading.—Psychology seems to have proved what many people had learned empirically, that a first rapid reading followed by several successive slower readings will produce better results in a given length of time than will the spending of the entire time in one slow, careful reading of the material.

Every conceivable effort should be made to secure two daily reading periods in third grade. One of these should be devoted to silent reading with two main purposes in view: (1) the continuance of extensive or appreciative reading of books beyond the children's power to read orally; and (2) the studying of reading lessons (and sometimes of other texts) to learn how to set an aim for getting the most out of a lesson, to practice doing this until "reading with a purpose" is second nature to the child, to lay the foundation for power to read constructively, to supplement the thought, to challenge irrational statements, to imagine the situations to be real. All of this can not be done with all pupils in a single year, but if a start is made in third grade, the effect will be cumulative and positive by the eighth grade.

Children have been made to be much interested in their own growth in some of these lines—in ability to ask sensible questions upon what was known and what was wanted; in ability to read more and more rapidly (as timed by the clock, in some cases; as shown by being among the early ones "through" instead of among the last ones, etc.); in ability to get more and more facts or reasons or points from a page in a limited time; and in other ways which suggest themselves to every teacher in earnest to secure this growth. "*Sweep* is the word in extensive reading; *thoroughness*, the word in intensive reading." Controlled library or home reading helps the one; the study-lesson, with the teacher on the alert, aids the other.

Oral Reading.—The classic or text-book selected for this must be below the children's maximum ability in silent reading. It needs to be dramatic, emotional, clamoring to be "shared." The pressure for correct pronunciation, articulation, picture painting, and inflection—the mechanics of reading—must come from the thought or the motive in reading aloud, not from external incentive. When, however, stumbling, repetitions, miscalling little words, mumbling, monotonous reading, careless thinking, or lax preparation, can not be cured while subordinated to the thought or emotions, the individual difficulty must receive special attention until conquered.

Aids.—(See usable suggestions for grades I and II. See outlines for *language* for grades I, II, and III. See Manual, pp. 279-292.) Since the meanings of words are often new, the

child must be urged to get all he can from the context, and, when he has done his best to extract meaning from the paragraph, to learn to recognize which word is troubling him. He should be encouraged, when reading aloud, to substitute a known synonym for any word he can not pronounce, so as not to spoil the listener's pleasure. Later, the word he did not know must be studied, and, if possible, conquered. If the pupil is trained to read with the eye ahead of the voice, and is not asked to read expressively material never seen before, excellent results in oral reading may be expected.

To secure the very best reading, whether study or expressive, specific aims must be set up. (See pp. 237-240 for examples of reading one page many times with new interest each time.) Third-grade children profit by being conscious of their rating according to some standard test, (see p. 293,) if the teacher gives them faith in their ability to reach the standard.

Sentences and phrases should be selected from the actual lessons for inflection drills. Pupils may plan to emphasize one word after the other, or to inflect the whole in different ways, noting that each change in inflection (or emphasis) causes a change in thought. They should then select the rendering desired to express their idea of the meaning. Try inflecting the Tiny Bear's various exclamations in different ways, noting how few are at all desirable: "Somebody has been sitting in my chair and has broken it all down!" Try emphasizing first one word after the other in this sentence taken from a text often used in third grade, "When his feelings were stirred he used to sneeze," and note that each emphasis changes the thought. Only the context could help one decide which would finally be best to use.

Phonics becomes an especially valuable aid in the independent pronouncing of words. To the work outlined earlier should now be added: The other needed vowel sounds, with their names; the few remaining consonant sounds, and certain digraphs and diphthongs; greater ease in rapid blending; a working knowledge of, but not necessarily a statement of, principles of syllabication and of syllable pronunciation, and the placing of accent, as indicated by the teacher, in word lists.

What results the third-grade teacher should secure.—Children as a grade should love school, love books, love to read, and should have grown steadily in eagerness, enthusiasm, concentration of attention, reasoning, and in ethical judgment. As individuals, each must have learned to do all of which he is capable, feel that his efforts are recognized, and that his opinions are respected. Pupils should meet the minimum standard set by whatever series of tests

the local school chooses to administer, but should have tried all year to attain one hundred per cent efficiency.

A fewer number of books will, naturally, have been read in class, since the material is new, harder, and consists of larger classic units than before. The amount of individual or home reading should have increased, but should not have degenerated in quality.

GRADE IV.

In the fourth grade, as reading difficulties increase, there should be ample time for both silent and oral reading, with study periods in which the children may be taught to gather the central idea, relate to it any subordinate ideas, supplement the thought, and acquire increasing skill in gathering and holding thoughts. (See third-grade suggestions for methods of work.) What the second grade did for the first, the fourth grade must do for the third—crystallize, make use of, and refine, all ability in word calling and in thinking there acquired.

Silent Reading.—Pupils need to work over and assimilate the wealth of new material opening up to them because of their present control of the mechanical phases of reading, and a school period should permit free discussion of all silent, appreciative, or supplementary reading. Constructive reading should be encouraged, and humor should be freely introduced. Up to this time, children's sense of humor has been so different from adult fun that it has been difficult for either side to appreciate what the other saw of fun in a particular situation. (Read Kenneth Graham's "Dream Days" and "A Golden Age.") Children need some sympathetic training in what is real fun and in the recognition of the double meanings of words which make some riddles, rebuses, and conundrums, so humorous. Their childish sense of fun, characterized by seeing persons in awkward or embarrassing situations, is satisfied by some of the "Robin Hood" stories, and by "Pinocchio's" difficulties. Both books contain, however, adult humor, and it is decidedly interesting to watch pupils grow during the fourth year in their appreciation of more and more subtle jokes. One teacher's work with "Pinocchio," parts of which were used for silent reading and parts of which were used for oral reading or dramatization, brought out the developing sense of humor marvelously. Wholesome fun is catching, hence the teacher must have a strong sense of humor, or she may work in vain to secure it from the children.

Oral Reading.—As said before, good oral reading demands material different from that demanded by silent reading in two particulars: It must be easier reading than that which the child can do by

himself, and it must be of a sort which impels the reader to share it—a bit of literature which, because of its beauty in either thought or expression, or because of the delicious humor it contains, is worth reading aloud.*

Ideals of what oral reading should or may be can be best acquired by hearing some good oral reading for about ten minutes each day—not the same lesson the children are to read, though occasionally that may be wise, but some bit of vital, dramatic literature which the teacher has practiced reading until she reads with abandon, clear enunciation, and vividness. She needs to put herself into the story and often to use large movements to accompany the new expressions, since the tiny, suggestive movements of a great artist would at this stage portray little to the pupils. Artistic reading grows upon one year by year, until one finally gets from the lifting of an eyebrow or the contracting of the forehead, when done by Sara Bernhardt, a whole volume of emotions. The fourth-grade teacher must steer between crude and over-artistic work; she must make the meanings carry and the pictures clear to her ten-year-olds, not to an adult audience. "Uncle Remus" stories, Kipling's two "Jungle Books," and historical stories, are great favorites. (See Minnesota Library List, and the language outlines.)

AIDS.—Though intermediate teachers do use thought methods in the actual reading work, it is a well-known fact that the rapid increase of long and difficult words in books used above the third grade demands very special emphasis on whatever means seem wisest to insure easy control of symbols. Some of those means are phonics, thought-spelling, use of the dictionary, games with words and their meanings, and the memorizing of poems or short prose selections to give vocabulary. Professor Palmer, in his "Self-Cultivation in English," says that a word used three times becomes the user's own. The reciting of memorized literature is one of the surest means of fixing vocabulary. Composition work (see pp. 30-37) is also a definite aid here, especially if the whole class develops a subject and the more fluent pupils contribute variations of phraseology which the word-poorer children may still use when all write the story. In spite of all these means, some students will still need definite mechanical drill on many words, while all pupils must be thus drilled on a few words whose pronunciation violates known (to children) laws of phonics. (Cough, hiccough, dough, Greenwich, and Beauchamp, are examples.)

* Jackson's "Letters from a Cat," Warner's "Camping Out" and "How I Killed a Bear," Crothers's "The Gentle Reader," are books that compel the child of 8 or 9, the boy of 12 to 14, or the adult, respectively, to insist upon some one's hearing them.

Some boys and girls must still be shown how to express different emotions, and different degrees of the same emotion; monotones occasionally need mechanical imitation drills to give them foundation ideals of voice variation, after which they may return to thought drills on different meanings as brought out by different inflections; dramatization continues to prove valuable for this purpose; the motive and the thought awaken interest and many mechanical difficulties cure themselves.

Mechanical skill may sometimes be a direct aid to thought getting, though over fluency has been known to hinder it. A study of punctuation needed by fourth-grade children will be of definite value both for gathering the thought and for sharing it.* In this grade, *dictionary work*, (p. 98, f,) as an aid to all phases of English, should be begun. Fourth-grade pupils should learn to go to the dictionary for pronunciations and meanings to help the reading but should still depend more on context for meaning than upon a dictionary definition. Whittier says in his "Snow Bound,"

We minded that the sharpest ear
The buried brooklet could not hear.

The dictionary will help little if at all on "minded" or "buried" unless the pupil supplements the thought and knows the context.

Seat-work in reading can be made one of the most valuable aids available, if only the teacher gives her assignments sufficient care.

What to expect by the end of the year.—See p. 293, for several standard tests, at least one of which should be given at the beginning, middle, and end of the year.

GRADE V.

As pupils advance from the primary to intermediate and thence to grammar grades, difficulties continue to arise. The vocabulary of good literature, and even of the non-literary text-book, is new to children not only in form, but in sound and in meaning. The reading process must necessarily be delayed while pupils get basal experiences and fundamental information; learn enough of life to understand familiar allusions; and exercise imagination and reasoning so that words and phrases bring clear images and have a rich content. They must also constantly cultivate judgment in accepting facts and values in what they read. Only by this sort of reading—never by mere word-calling—will pupils be fitted to continue their own education by means of current as well as classic literature when they have left school.

* Every teacher of fourth grade and above should own, study, and follow, suggestions made by Clark in his "Interpretation of the Printed Page," or, his earlier book, "How to Teach Reading in the Public Schools," if already owned; or any other good guide to teaching reading.

Many teachers find in use in their schools, readers that are too hard for their grades. If new ones can't be bought, the teacher may still do something, for if the children are encouraged rather than discouraged, a little mental stretching isn't bad for them. The teacher should begin by carefully cataloguing the lessons in the reader according to the amount of (a) action, (b) dialogue, (c) material for pantomime, (d) pictures to be made in seat-work, (e) materials related to other lessons, (f) materials to suit the different purposes for reading, (g) difficult words as to pronunciation, (h) difficult words as to meaning, (i) humor, (j) emotions such as loyalty, truth, courage, and persistence, and (k) lessons fitted for only silent reading and those good for oral reading.

Having done this, the teacher should choose lessons which he knows will be the easiest or the most attractive for a week or two, during which time he should be diagnosing and keeping record of the difficulties of both the individuals and of the class as a whole. He may now begin work on the most vital need of the majority, concentrating for a few minutes daily on that until the pupils themselves recognize their gain.

Even backward boys have been seen to glow with pride over their gain of no more than one minute in a week in their time of silently reading a given amount. One lad, fearing that his teacher hadn't remarked it, asked, "Have you noticed that I never say *stawmp* any more for *stamp*?"—glad to be gaining in the pronunciation of a single word.

As soon as the pupils begin to be self-critical of an error, the teacher may safely begin work on the next greatest difficulty. Seat-work of kinds to help the various errors may be consciously selected. Possibly the suggestions for the teaching of a simple poem, "The Coast Guard," may help to illustrate some of the points mentioned. (See pp. 241-245.)

Silent Reading.—(See language outlines for the kinds of reading matter many enjoy at this age). The teacher must not depend, however, on any general list, but must quickly learn the tastes and interests of his pupils. The "reading habit" should again be definitely worked for, if seen to be at all on the wane. The room library of thirty to fifty books chosen to suit individual abilities and interests, with a set period for reporting upon progress in reading and sharing the pleasures of the book with others, will revive or keep alive interest in home reading.

The need of children's getting the gist of, the exact meaning of, or the points of vagueness in, the various lessons—geography, history, and arithmetic—will suggest to the teacher the kinds of work he should do in the study-half of the silent-reading lesson. These

texts may even be used occasionally for learning to recognize main and subordinate points and their interrelation, for judging of values, and for recognizing fallacies or irrationalities; for learning to supplement the thought, from one's own experience or by consulting reference books; and for making pupils like lessons that demand such effort.

Oral reading must be made much of, since the new danger is that both teacher and pupils may grow engrossed with the necessary thought-gathering and organizing demanded by all lessons. Children must still love to dramatize, to share their most enjoyed books, and to keep up their power to read clearly, fluently, and accurately. They must stand well, read to a sympathetic audience, and use good tones and correct pronunciation. They must feel and show interest in what they are doing, confidence in their ability to convey the thought, and self-possession before the audience. This isn't easy to get at this age, since it is one of the self-conscious periods, and so teachers must commend effort, and set good ideals by their own self-control and freedom in reading.

AIDS.—Dictionary work (p. 98) should be continued; language work, including the listening to and the telling of stories, will be a direct help; word drills outside of those planned in connection with dictionary work and spelling will not be numerous. Seat-work in all subjects may now assist thought gathering and clarifying, and seat-work in reading should be of the sort to secure more associative thinking, more image making, and more application of daily experiences to those pictured in literature, or the reverse.

What to expect.—Test pupils by standards selected more than once during the year, and work to attain one hundred per cent efficiency by the end of the year.

GRADE VI.

Silent Reading.—If the crowded program forbids two reading periods a day, (fully as much needed above the primary as in the primary school,) then the teacher must make the history and geography lessons serve a double purpose, for they must be used for study-reading lessons where children learn to gather facts, to get the gist of an argument, to test the soundness of ideas, and to learn how to find desired information quickly, through use of indices, tables of contents, chapter headings, etc.

The necessity for slowness and thoroughness in study-reading must be counterbalanced by at least one period a week in extensive or inspirational reading, with almost no interruption for mechanics, so that children get, what has been said before, that indispensable

feeling for "sweep," for onward movement in a story, regardless of "verbal no-thoroughfares."

Many teachers continue the lower-grade plan of having children read individual books at home, reporting once a week their progress in the books and sharing with their classmates bits that were especially enjoyed. Of course the rapid readers may easily finish more than one book in the week, but they give an inkling of what is in each so that others who like that sort of reading will know what to choose. As one of Miss Lynn's* characters says, the child who loves to read almost always has another book "waiting and holding out a fascinating promise" while yet the reader is hurrying through the book in hand. Even the slower readers in a class catch the epidemic of such love of reading. To quote Miss Lynn's child again, "There is nothing that furnishes greater promise of continued satisfaction in life than to know that whatever happens you can always read. However other interests may fluctuate or fail, there are always books, and there is always an interesting one if you only search long enough for it. It gives a sort of certainty to life, and an assurance of its continued likableness, to know that there need be no dull interstices in it. Games may flag, and brothers and sisters may have moments of slightly damaged amiability, but entertainment need not pause while there are still books to read. If there are no new ones you can always read David Copperfield again."

A book enjoyed by several in a class may be "cut" and the parts read by the several children to make an afternoon's entertainment for the remainder of the school.

One teacher† planned a clever entertainment of parents and others after this fashion: A child was sitting in an easy chair near her book-cases. She wanted to read, but did not know which of her many favorites to choose. As she pondered over it, thinking of one book after the other, she fell asleep and "dreamed." Her dreams were then enacted by all the other pupils of the grade, who came forward singly or in groups and gave the gist of one book, dramatized a scene from another, recited portions of others, or read parts of others, telling briefly the connections between parts read. When all the books the dreamer most loved (that is, the books read by individuals in the grade for two or three months) had passed in review before her, she awoke, and, with a caressing gesture for all her books, she declared she "loved every one the best."

Oral Reading.—If but one short period can be given to school reading, it must be devoted to teaching pupils how to enjoy good literature and how to give others pleasure through their good oral reading. If pupils feel strongly enough the desire to give to others, the necessary incidental and supplementary mechanical drills on enunciation, local pronunciations, inflection, control of pitch, etc., will be sought rather than avoided by pupils. Even two minutes

* "A Stepdaughter of the Prairie," Margaret Lynn.

† Miss Harriet Z. Campbell, Bowling Green, Ohio.

a day will accomplish appreciable growth, and five minutes a day will do wonders by the end of the year. The plan described under silent reading makes a good motive for effort in oral reading too.

AIDS.—(See sixth-grade language outline, and the reading outlines for lower grades.) Since this is another period of rapid vocabulary increase, pupils must be urged to conquer the pronunciation of new words as they read, so that they may give pleasure to the listeners. They should be made to feel that words are tools, and that fluency in word calling is to be likened to well-sharpened tools, with which the best work can be done. Phonics, if still needed, spelling, and dictionary work, may become the main aids to this refinement of pronunciation and quick recognition of symbols. Punctuation-marks, as symbols of variations in thought, may well be studied more carefully than before. Likewise, the different significance of the various correlative, adversative, and subordinate connectives, should be noted as an aid to interpretation of thought and to correct inflection in giving the thought.

Original dramatization of material should be begun in sixth grade. The writer secured rather surprising results with a weak class in their changing of Hawthorne's descriptive story, "Old Esther Dudley," to dramatic form. The vocabulary, which seemed an insurmountable difficulty at the first reading of the story, was so often gone over as different pupils employed it in their trial speeches of the different characters, that, by the time pupils were ready to assign parts and prepare to act and speak these parts, not a dozen words in the whole play had to be drilled upon. It proved again for many teachers that securing the larger end will in general conquer the smaller, and that teachers need to give larger motives than those ordinarily proposed.

To aid silent reading, nothing is better than reference reading for a specific purpose, such, for example, as was done in 1915 by the sixth-grade pupils of the Ethical Culture School in their plan for their festival, "America the Wonderland."* The interrelated material of geography, history, and literature, can be utilized to great advantage, and the study periods should be making pupils steadily stronger in their grasp of the central idea and the relation to it of necessary details. The dictionary habit can be about "fixed" in this grade. (See pp. 98-104.)

What to expect.—As in grades below, some standard tests should be given several times during the year, and effort put forth to make the poorest pupils reach the minimum and the best to attain one hundred per cent proficiency.

* Book by this name, published by the Ethical Culture School, New York City, 60 cents.

GRADE VII.

Whatever privilege may be accorded to the primary teacher in the use of symbol methods, no such favor can be granted to upper-grade teachers. Thought methods, and only thought methods, will serve their need. Children must be fitted to read for different purposes in different ways,* just as adults do; that is:

1. To secure all the facts from the page, as when reading a guide-book before going to visit some point of interest, or when reading a prospectus of some business in which one wishes to invest.

2. To get only the important facts, as one does from his daily newspaper.

3. To get the trend of thought in an article; for illustration, to see whether a certain congressman does or does not favor forest conservation, and hence what will be done for our state.

4. To learn the arguments advanced, requiring ability to pick out main points and see their interrelation, as in studying the President's position as to internationalism, for example.

5. To discover some very definite and desired facts such as the iron-ore output from the mines of Ely, during some one year.

6. To find whether certain facts are present or not, as one does when he is to write a paper on "The Indians in this part of Minnesota" and goes to the library to select several books to be taken home for study.

7. To satisfy one's longings, one's ambitions, desires, or emotions—a situation in which facts are purely incidental and scarcely even remembered; one reads for the inspiration he gets from the inner spirit of the story, or for the rest he gets from the fun that's there. This demands (1) a wide experience, so that the imagination may have full play; and (2) eye-fluency in the recognition of symbols. (Children can be taught to let the eye read ahead of the voice).

8. To share with others thoughts that have delighted the reader. This requires power in oral expression, for "if we are to fire the soul through the ear, we must control the instrument," the voice, with its possibilities for varying intonation, inflection, pitch, and force.

The school, then, must provide opportunity for many sorts of reading: for study-reading or intensive reading; for exercise in being "a judicious skipper"; for rapid or extensive reading, which leads, first, to the reading habit, and, second, to discrimination in selection; and, finally, for reading to be shared with others. This last demands two things:

1. Evident appreciation of the thought—having something to give (as in language).
2. Evident desire to give the thought to others, hence a desire (and its attendant result)—
 - (a) To read distinctly (to be heard)—good enunciation—not mumbling.
 - (b) To read smoothly (to be enjoyed)—good pronunciation—not stumbling and miscalling words.
 - (c) To read to make the thought carry (to be understood)—good grouping or phrasing—recognizing main idea—true emphasis and inflection—and noting contrasts—correct time—collateral thinking—force—desire to reach audience.
 - (d) To read to please hearers—correct pitch (no strain). Correct tone quality (appreciation.)
 - (e) Read to arouse hearers to action—Emotion.

* Said in 1902 in the New York Teachers Monograph, by Dr. F. E. Spaulding.

The debate always comes, Will emphasis on thought gathering bring good thought giving, or must children acquire (consciously or unconsciously) some of the technique of good expression? The writer believes that children of this age crave some knowledge of "How to say it"—some of the principles of correct reading. She would therefore advocate the teacher's study of S. H. Clark's methods, and the use of such of them as the class needs. Clark believes that a thorough grasp of the central thought, an imagination that builds vivid pictures, a careful study of shades of meaning as expressed by single, often obscure, words, and the arousal of active rather than passive emotions in pupils, will secure good oral expression. The idea of some practice on placing emphasis, on making pauses, and on changing inflections, pitch, quality, time, and force, in connection with worth-while selections, does not oppose the thought method in upper grades any more than word drills oppose thought work in primary grades.

Silent Reading, as said in earlier grades, can be secured from study-reading of other lessons, reference reading, preparation of some themes in composition, and in still further use of home or library reading. If the reading habit has been formed, the teacher may now influence the children's individual tastes in their selection of what to read. His own knowledge of books must be broad, for he will have pupils who are already interested in science, art, music, poetry, and essays. He must know a little of every line, and be ready to go deeper into whatever fields he finds appealing to the children. Many pupils will be forming their life foundations in reading during the seventh and eighth years, and need to know how to find what they want in a library, as well as to know that such good books as the teacher reads or has on his desk are available. Dickens, Ruskin, Plutarch, Tennyson, Prescott, Thackeray, Victor Hugo, Irving, Warner, are a few of the authors that seventh-grade pupils have been known to devour. Of course some students are still fond of easy fiction, and if good fiction is read, that is better than not reading at all; but all fiction, like all play, makes Jack (or Jill) a dull child, not able to crack the harder nuts of literature to be met in high school and in life.

As suggested under language (which outline should have been read), a few children will be looking towards a selection of their life-work, and teachers must know about available literature on the various vocations. Current events should be emphasized somewhat more than before, though some study in current events should have been made from third grade up. Exercises on how to read newspapers and magazines have proved most valuable.

Oral Reading.—The daily half hour devoted to oral reading must continue to emphasize good posture, voice, intonation, articulation, and pronunciation, as aids in pleasing the audience. The teacher must guard against taking too much time for literary analysis and other discussion of the thought, remembering that each pupil should read aloud at least a little every day, and that a few pupils should each day do a piece of sustained reading which would demand different styles of oral reading and give practice in flexibility of voice and of thought expression.

Aids.—Language work, study-work in all lessons, dictionary work (p. 98), and drill exercises on most needed points, are the main aids to good reading, besides those implied in the introductory paragraph of this grade's outline.

Expect pupils to reach the common standard of seventh-grade pupils according to the test agreed upon as best suited to this grade. (See pp. 292-295.)

GRADE VIII.

All the work of the lower grades should here culminate in the final elementary mastery of the reading art. The high-school work in Literature is usually devoted to a study of style, figurative speech, and literary allusions, so that comparatively little *reading* (either oral or extensive silent reading) is definitely motivated there. Pupils who have already acquired the reading habit and good foundation tastes, keep up their outside-of-school reading of their own initiative; but pupils who haven't the reading habit fixed, grow to feel that it isn't worth the effort, if to read properly one has to look up every word, cross reference, and figure of speech, spending several days on a dozen lines of some poem. Therefore must eighth-grade teachers of reading know the individual status of each pupil and give to each what he most needs—love of books, fluency in eye-reading, ability to get the central idea, to carry a succession of ideas, power quickly to note the significance of a comma in changing the thought, or ability to read aloud pleasingly. Some pupils need further training in newspaper and magazine reading, since they will do most of their reading in current literature and none can lose by such practice. Others need to learn how to enjoy century-old classics. That pupils may read after leaving school, they must have learned (1) how to *enjoy* literature by getting clear pictures from words, by reading their own experiences into the book—that is, by reading between the lines—and by keeping actively receptive to new ideas and inspiring thoughts; (2) to know how to get an organized body of facts together after having exer-

cised judgment in their selection, from personal information and books or magazines; and (3) to know enough of the practical technique of oral expression to make others enjoy what the reader does. These three phases of reading must be "rounded up" in this last year of the elementary school, and pupils helped to meet the standard tests agreed upon.

Silent Reading.—Besides the contributions from outside reading made in the supplementing of all lessons, pupils should be encouraged to make a study of certain authors, learning by "extensive" reading of several books by the same author, his characteristics of plot, style, etc. Biographies become interesting, particularly when they are well written, as are many biographies of Robert Louis Stevenson, and is Palmer's "Life of Alice Freeman Palmer." This study of authors and their works must not be exhaustive, but should satisfy the special need of the pupil, as said above. The work done should rather make the pupil look forward to intensive study later, either in high school or in the leisure of adult life, than to make him feel that he has gotten all there is to get from the book or author.

Too much reading of light fiction tends toward the reading of a book but once, and should be discouraged, by substituting other books and showing pupils the inexhaustible resources of books which the world has long found good—Hawthorne, George Eliot, Dickens, Shakespeare, etc. Though light fiction has its recreative function for adults, it is not the sort of reading to be too early made habitual. The teacher must use every possible means to help pupils get a big outlook on the making of a living and on the living of a full, rich life. Lives of truly great men, stories of the great industries, and really great books, should be the only reading encouraged. Fun must not be omitted, but it, too, must be "big" fun; not the sort which enjoys another creature's discomfiture, but fun such as may be found in the works of Oliver Wendell Holmes, John Kendrick Bangs, Samuel Crothers, Charles Dudley Warner, and dozens of others of our humorists who have no "sting" to their fun. (Kenneth Graham and Margaret Lynn will help teachers to realize what children like.)

Oral Reading.—Original dramatizations of stories like "Rip Van Winkle," "Ivanhoe," "The Man Without a Country," "Adam Bede," "The Vicar of Wakefield," Van Dyke's "The First Christmas Tree," and "Story of the Other Wise Man," are excellent preparation for the giving of all or of parts of several of Shakespeare's dramas in the author's exact words. A finished result (though necessary to work for as a motive for careful organization

of parts, for practice in reading, and for becoming "line perfect") is not the most valuable part of such work; the greatest value lies in the developed power of the pupils to get out of their reading, both silent and oral, the three essentials named above, and to learn the lessons which all group effort teaches.

Constructive Reading.—Expressive reading, artistic reading, interpretative reading, are all different names given to what is the new line of conscious effort in eighth grade (prepared for, however, throughout the lower grades). It is a power to be explained rather than defined, to be "caught" from a teacher rather than "taught" by him. As Mabie says, it can be cultivated, though it is a "gift" to some. Whether doing silent or oral work, the constructive reader interprets an author through his own experiences, through an analysis of his own emotions and intellectual reactions, and reads between the lines his own philosophy of life. If that philosophy is big and optimistic and generous, well for the reader! And well for his hearers (if he reads aloud)! Such reading trains the mind, stimulates imagination, makes delicate discriminations possible, deepens the nature, and stores up for the individual a wealth of which he can never in life be robbed. Such reading destroys provincialism and prevents impulsive and crude even if well meant reactions; makes for "culture" in the finest sense of the word, since, vicariously, the reader has learned just how others feel and act in given situations, and is able in most delicate ways to show his complete understanding of people in every walk of life, and in every mood. This is certainly a kind of reading that is worth cultivating. If a teacher brings to school and shares with pupils bits which he has gleaned from his reading, if he and the pupils keep a note-book (or begin a card catalogue) of quotations from books read, with date of first reading, and page where the quotation is found, a good start will be made on the road to constructive reading. Of course it doesn't end with the eighth grade.

When students read aloud, attempting to show others the fun, the philosophy, or the information, to be seen in a given selection, more "finished" modes of expression are desired. To help these, students should hear readers of ability who make few, but telling, gestures to convey their ideas. If possible, the teacher should tell pupils what to look for in some good actor, go with the entire class to the play, and then discuss it later. (It would pay a school to give pupils just such opportunities, but at present this isn't the fashion. The pupils might, however, by entertainments of their own, have a fund for such use.) Forbes Robertson's interpretation of Hamlet was just such an opportunity to some pupils last year.

Although pupils of eighth-grade age can't appreciate nor by any means imitate all the finesse of an artistic reader, they are impelled in the right direction, or at least receive an inclination away from uncouth or boisterous display of emotion, such as Hamlet solicited his "players" to avoid. In a college or normal-school town, eighth-grade teachers can usually secure the help of the head of the Dramatic Department in the school, to read something slightly above the pupils in so artistic a way as to convey to them the beauty and worth of fine interpretative reading.

AIDS.—(See eighth-grade language outline and preceding grade reading outlines.) Work with the dictionary should now point out this book's many values and how it may be used for almost every need. Foreign derivatives, with the meanings of their roots, prefixes, and suffixes, may be studied as a direct aid to vocabulary increase and classification.

DICTIONARY WORK FOR GRADES IV TO VIII.

I. *Handling* the dictionary (or any large book).

A. How treat—

1. When new.

- a. Hold so it rests on its binding and gently let it fall open. Press gently up and down.
- b. Open at gradually shorter distances and repeat the pressing, until it has been done at about every 20 pages, to prevent any sudden strain on back.

2. When opening and closing. 3. When turning pages.

B. How cover: (1) For temporary use; (2) for permanent use; (3) keeping the cover clean.

II. What to know *about* dictionaries.

A. Their purpose. (Study title page as one means of knowing this).

1. To give correct spelling of words. 2. To give correct pronunciation of [words.
3. To give meaning of words.
 - a. By definitions. c. By discriminating synonyms.
 - b. By derivations and history. d. By illustrations of literary usage.
4. To give miscellaneous information.

B. Divisions of the book.

1. The body—the main part.
2. Introduction and supplement—comparatively small portions of the dictionary, but very valuable. (See topic III F.)

C. The reliability of the dictionary.

1. Its evolution—to be made more or less elaborate as time and interest warrant, but, in any case, to show how many people have to work on a dictionary, how long a preparation is required, how the results must necessarily be fallible, and yet how very trustworthy the book is.
2. The accepted authorities.
 - a. Century. c. Webster—International, replacing Unabridged.
 - b. Standard. d. Worcester.

(School editions of the last three dictionaries are published.)

III. Learning to use the dictionary.

NOTE ON GENERAL METHOD: If children have never had similar lessons, begin these in any grade, but adapt method to the age of the pupils. The following plans and devices are meant to begin in 4th grade and to continue through 6th, or longer, if necessary. It is very desirable that each child own or have the use of a dictionary, though a live teacher can, at a sacrifice of time, get along with as few as two books, provided they belong to the school and can be justly loaned to all the pupils in turn. If the school has the use of sufficient dictionaries, these exercises may well constitute a three- to five-minute exercise daily, for all; if not, the school may be divided into necessary groups, each group working in one—or, at different times, in all—of several ways: (1) two pupils in one seat, alternating in following and observing the other follow directions; (2) small groups of 10 or 12 taken each day, thus giving each child a chance every third or fourth day; (3) have work not requiring dictionary paralleling that needing the book, so all may have something to do during each exercise; (4) make the process progressive, letting the two children (if only two dictionaries are available) who had the book-lesson this morning, pass on the lesson to two more, at some convenient study-hour, and as a reward for good work on the part of all four pupils concerned. Continue at different intervals in the day, if wise and possible, so that any other two are prepared to continue the work on the following day. It is also a great convenience to have all books being used of the same make and edition, but the teacher can look up words in several books if necessary, rather than not to give the work at all, though the district would do well to weigh carefully the relative value of the teacher's time and energy spent in this way against the cost of a few dictionaries. (+ D means, *use the dictionary*; — D means, *work to be done without a dictionary*.)

A. Locating words in the dictionary—

1. By knowing the location of the letters in the dictionary.

+ D. a. "Guide-posts" located.

1. M, in middle of book.
2. D, half way between M and title page.
3. S, half way between M and end.
4. A, very short distance from title page.
 - a. Count pages in introduction.
 - b. Note thickness with fingers; with eye.
5. Z, about twice as far from end as A is from beginning in school dictionaries. Test for own book. X, Y, Z, each so little space that all may be learned as Z.

b. Practice opening at each guide-post after it is learned.

c. Recognizing place of other letters of alphabet in relation to guide-posts.

2. By knowing the value of the catch-words at the top of the pages.

(Have pupils notice the catch-words at several openings and where else these words occur on the pages. Lead them to feel the need of arranging words alphabetically with ease, and recognizing quickly the place of one word in relation to others.)

Devices to use:

a. Arranging words in alphabetical order—

1. By first letters only (initials all different).

—D.

- a. Children's names—given and surnames.
- b. Ten cities, rivers, etc., from geography.
- c. Ten men, places, etc., from history lesson.
- d. Ten things seen in the schoolroom, found in the kitchen, used in the dining-room, living-room, etc.
- e. Toys, things seen on way to school, Christmas gifts received.
- f. Objects to be seen on looking from a window, going on an errand to another grade, at recess, etc.

2. By the remaining letters of the words when initials are alike.

- a. Children's full names.
 1. For the teacher's register, e. g.
 2. For list to be put on blackboard or big cardboard to be used in some game or in a device for keeping records of each child's attainment, etc.
3. By grades, or classes, or rows.

- b. All hard words found in reading-lesson, arranged alphabetically, so list of all can be easily checked in recitation; also so class can quickly check how many had same words, so that the probable relative difficulty can be noted.
- c. Spelling-lesson rearranged alphabetically (a good review, a careful looking at all letters, hence an aid to study).
- d. Names of children's cousins or other relatives.
- e. Places visited.
- f. Places to be passed in going from Chicago to New Orleans by Illinois Central; from St. Louis to Los Angeles by Southern Pacific; from Duluth to Toronto by lake steamer; etc.
- g. Names of school subjects.
- h. List of a day's different activities.
- i. Months of the year.
- j. Noted people born in February.
- k. Each child to make up a miscellaneous list of ten, twelve, etc., words for others to rearrange.
 1. Timed by the clock.
 2. Ranked in order of finishing. Have papers turned face downward to indicate completion and not to be thereafter changed; deduct $\frac{1}{2}$ (or any agreed-upon amount) from a student's rank for each error, so that speed may not be placed above accuracy.
- b. Applying above knowledge to recognizing place of given words in relation to others.
 1. Select from any assigned lesson three, five, or ten, words that may be found between *canter* and *reveal*, *e. g.*
 2. Narrow the distance gradually but plainly until field is covered by one initial; *e. g.*, words between *machine* and *mystery*.
 3. Narrow by letting succeeding letters guide; *e. g.*, between *meat* and *method*; or between *accent* and *access*.
 4. Teacher selects real catch-words at top of pages in the dictionary, writes the extremes on the board, and then writes a word at a time or a brief list of words for pupils to challenge as to place—
 - a. yes—between the words.
 - b. no—before the words.
 - c. no—after the words.
 Vary by letting individual pupils prepare the words, or at least the list to be challenged.
 5. Apply all this to practice with the dictionary. All try to find *black*. Let all turn to the page at which the teacher happens to open first; for example, the page with *bondage* and *bottle* as catch-words. Teacher then asks: Is *black* to be found before, on, or after this page? Shall I turn to the left or the right? Shall I lift few pages or many? About how many? Shall I read all the catch-words as I turn? (No, only the one farthest left, so I may not go too far. Or, if turning to the right, which word would be better to look at?) Tell me when to stop. (Teacher reads words aloud as she lifts the pages). Why stop here?
 6. Let some child take the next word, letting all assist. Teacher may need to ask some questions similar to those in 5 above.

3. By drilling to secure ease and independence in locating words.

Devices to use: Hectograph several lists of ten words in a group. Pass these to pupils who are ready to begin and stop at a signal. Time pupils on finding one word at a time. Later, five words; then ten. Children write page number at the right of each word.

- a. Find opening only—either page number correct.
- b. Limit to exact page.
- c. Add column and distance down the page to page location.

B. Learning to pronounce words in the dictionary.

— D. 1. Review and keep up such phonic work as will be needed. (See foot-notes at any opening of a school dictionary.)

- a. Vowel sounds: (1) Long; (2) short; (3) odd; by name, not by markings.

- b. Consonant sounds, also by name, and not by diacritical marks.
- c. Ability to blend known sounds into word or syllable.
2. Master pronunciation of key words in footnote at any opening—
 - a. Of dictionary most to be used.
 - b. Of other dictionaries in room.
 - c. Of any other dictionary.
3. Acquire ability rapidly to apply the marked sound in a familiar word to a similarly marked sound in an unknown word.
4. Place accent where indicated. Since the meanings of many words change with different accents, the ability to notice accent-marks and to place accent properly is necessary to acquire. Metcalf's suggestion for using figure syllables is unequaled.

1' 2	con'tent	prod'uce	im'press
1 2'	content'	produce'	impress'

Practice placing accent in words of several syllables by means of the 1' 2 3, 1 2 3', 1 2' 3, 1 2 3 4', 1 2' 3 4, etc., and incidentally learn the correct accent in a number of commonly mispronounced words; for example, ex'quisite.

5. Learn to apply (even if not to word) some of the commoner rules of pronunciation, so that even unmarked words may be readily pronounced. The number of rules to discover and apply, and the number of exceptions to be taught, must depend on the age of the pupils. The suggestions given below can be used in fourth grade:
 - a. In contrasting such words as *man* and *mane*, *met* and *mete*, *pin* and *pine*, *rod* and *rode*, *cut* and *cute*, children recognize and can apply the following two rules of pronunciation:
 1. A vowel followed in a syllable by a single consonant is usually short.
 2. In a syllable, final *e* preceded by a consonant and that by a single vowel is not sounded, but usually makes the preceding vowel long.
 - b. A study of a large number of words or syllables containing two vowels leads to the conclusion that in such cases the first vowel is usually long and the second silent. *Examples*: *Loan*, *meat*, *rain*. Exceptions are numerous, yet the rule is often helpful.
 - c. *C* is sounded like *s* and also like *k*; when?

NOTES ON METHOD: During a week or two, reserve a blackboard space in which children write all the words they chance to find which contain *c*. Let this be incidental to other work until interest is aroused and the list grows long enough to permit some generalizations—perhaps by the end of the second week. At the proper time take ten minutes to study the words and separate all in which *c* is sounded like *k* (hard) from those in which it is sounded like *s* (soft). Then, for assignment, let the words in each group be arranged in sub-groups according to the letter which follows *c*; thus we should have *come*, *second*, *becoming*, *recognition*, *sycophant*, etc., in one group. If all the letters of the alphabet are not represented, let pupils search for a few days, at odd moments, for words to supply the deficiency. Examples of all but six or seven can be found.

Students are now ready to make some generalizations, out of which they may select and commit such as will be of future help in pronunciation. A few are given merely to suggest what may be found: 1. When *h* follows *c* the two letters unite to form a digraph, pronounced *k*, *ch*, or *sh*, in different positions. 2. *C* followed by *k* or *s* in the same syllable is silent; as, *back*, *czar*. 3. *C* is soft before *e*, *i*, and *y*, and hard in all other positions.

After the generalizations have been made, the students may watch for exceptions for a week or more. Perhaps some one will find *facade*, a word from the French always having the *c* marked soft because it is so evidently a violation of the rule.

To apply the principles deduced, (1) lists of words may be placed upon the board for rapid pronunciation; (2) lists of words containing *c* may be dictated for spelling; (3) pupils may take pages in their reader, geography, etc., and classify the words into three groups, namely, (a) hard *c* by rule, (b) soft *c* by rule, (c) exceptions.

- d. In a similar way, the rules for the two main sounds of *g* may be developed, though the exceptions to the rule that *g* is soft before *e*, *i*, and *y*, are many.
- e. Study of vowels which constitute or end unaccented syllables gives these rules: *a* is usually short Italian (*idea*, *machine*); *e*, *o*, and *u*, are usually long (*evasion*, *locomotive*, *accurate*); *i* is usually short (*division*, *multiplication*), but is sometimes long in initial syllables (*ideal*, *biology*). Pupils will enjoy pronouncing lists of words in application of these principles, and such lists are easily made from the various lessons:

ap-pli-ca-tion	prin-ci-ples	a-rith-me-tic
di-vin-i-ty	com-pli-ment	ge-og-ra-phy
com-ple-ment	re-gen-er-ate	sup-pli-cate

6. For written work, pupils need to know how to syllabicate words; but also, since pronunciation principles can be applied to syllables in a long word, pupils who know how to syllabicate can more quickly pronounce new words. There is but one sure way to syllabicate correctly—consult the dictionary! But as one often needs to pronounce words without that help at hand, one desires other means, even if less reliable, hence the following laws of syllabication are given. When all three, or even two, agree, the student may feel fairly safe, but when there is conflict, the dictionary should be consulted:
- If a student already knows how to pronounce the word, he can usually distinguish the syllables; but if he isn't certain, some other law may be summoned to his aid. *Example: In-com-pre-hen-si-ble.*
 - If he has had work which helps him recognize roots, prefixes, and suffixes, he will recall that these are seldom run together into syllables, as, for example, *ex-cep-tion*, *re-view-ing*; but he must also recall his laws of spelling, so that he knows that the duplicated consonant which was a part of the *root* in *filling*, was added with the suffix in *cutting*; he must also have learned that a prefix often changes the pronunciation of the root, as in *recommend* and *immigrate*.
 - The placing of the consonants in relation to the vowels aids not only in syllabication, but also in pronunciation. Such combinations as *th*, *ph*, and *dr*, are counted as one consonant. When two consonants occur between two vowels, one goes with each vowel. *Examples: Con-sonant, com-bine, syl-lable, lit-tle.* When only one consonant occurs between two vowels it usually goes with the second. *Examples: Conso-nant, syl-la-ble, u-su-ally, di-verge.*

C. Learning how to consult the dictionary for the correct spelling of words.

- Know what sorts of words one may *not* expect to find in an abridged dictionary, and hence the rules of spelling needed for words not spelled in full.
 - Past tenses of verbs if regularly formed; *e. g.*, *soiled*.
 - Plurals of nouns if regularly formed; *e. g.*, *ladies*.
 - Derivatives easily made; *e. g.*, *uninhabitable*.
 - Regularly formed comparatives and superlatives of adjectives; *e. g.*, *richer*, *richest*.

[Eighth-grade pupils at latest may learn the following rules, using them when in doubt and when no dictionary is at hand:

- Monosyllables and words accented on the last syllable, ending in a single consonant preceded by a single vowel, double the final consonant upon the addition of a suffix beginning with a vowel. *Examples: Run, run-ning; red, reddish; hot, hotter; wit, witty; abet, abetted; occur, occurrence; begin, beginning.*

Corollary: Note with care words which do not come under the rule and why they do not: Two vowels—*rain, raining*; two consonants—*warm,*

warmed; accent on first syllable—*travel, traveler; profit, profitable*; suffix begins with a consonant—*hot, hotly, cap, capless*.

- b. Words ending in silent *e* omit the *e* upon the addition of a suffix beginning with a vowel, except when such omission causes an error in pronunciation or a confusion in meaning. Examples: *Bride, bridal; come, coming; move, movable; sleece, fleecy; force, forcible*. Examples of retention on account of pronunciation: *Notice, noticeable; manage, manageable; advantage, advantageous*. Examples of retention to keep correct meaning: *Dye, dyeing (vs. dying); singe, singeing (vs. singing); tinge, tingeing (vs. tinging)*.

Corollary: When the suffix begins with a consonant the *e* is usually retained: *Hate, hateful; move, movement; pale, paleness*.

- c. Nouns ending in *y* preceded by a consonant form the plural by changing *y* to *i* and adding *es*. Examples: *Lady, ladies; sky, skies; reply, replies*.
d. Nouns ending in *y* preceded by a vowel do not change the *y*, but merely add *s* to form the plural. Examples: *Day, days; monkey, monkeys; turkey, turkeys; attorney, attorneys*.

Corollary: When the suffix begins with a consonant is quite frequently changed to *i* in derivatives. Examples: *Daily, dalliance; icy, icily, iciest; mercy, merciless; pity, pitiful; multiply, multiplication*.]

2. Know sound equivalents or near-equivalents so that if sound is the only guide, the word may still be found.

- a. Homonyms, like *beet, beat; rain, rein, reign; pare, pear, pair*.
b. The sound of *f* may be spelled with *f, ph, pf, or v*. Long *e* may be spelled with *e, ee, ca, ie, ei, or i*, as in *evil, knee, meat, niece, receive, machine*. Teacher should study introduction to dictionary and give pupils the sound equivalents most needed, or show older pupils how to find out for themselves.
c. The *n* sound, when initial, is often spelled with *gn, gnome; kn, knoll; or pn, pneumatic*; in which the first consonant is silent. The same is true of *s* and *z* sounds—*psychic, czar*, etc. Teach children to hunt many places for a word, till found. A good game is for the teacher to pronounce ten words which pupils take down by sound alone, or by sound and a hint of the meaning, and then find: *Currant or current, prophet or profit, diver, sailor (or sounded like er)*, etc.
d. Whether a single or a double letter may be expected. For example, in pronouncing *accelerate*, one sees he must have two *c*'s or the *k* sound couldn't be heard, since one *c* before *e* would be like *s* only; contrast *imitate* (a root word) and *immigrate* (a derivative), and note why in one case there are two *m*'s.

3. Attitude towards reformed spellings.

- a. Choose rule if one spelling is by rule; e. g., choose *traveler* and *worshipping*.
b. Choose simpler spelling if recognized by best authorities.

4. Eye training necessary to enable students to recognize slight differences—an aid to pronunciation, spelling, and meaning; for example, students often write *percept* for *precept*, *clam* for *calm*, and go so far as to write *prehaps* for *perhaps*, and *casual* for *causal*, or the reverse. Many games and devices are easily thought out for this work.

- D. Learning to choose a definition—to get the right meaning for a word.

1. Know whether word whose meaning is sought will be found in the dictionary or not.
a. See C, spelling, above.
b. Learn commoner prefixes and suffixes and how to attach them.
c. Be able to change a noun's definition to fit a derived adjective or verb.
2. Note the relation of accent to meaning, and learn the meaning of the more usual abbreviations, a., n., v., v. i., q. v., etc., which guide one in selecting a definition to fit context.

- E. Learning to find the choicest word to use to express a thought accurately.
 - 1. Hunting for synonyms and discriminating one from another—
 - a. When grouped. b. When necessary to be looked up one by one.
 - 2. Finding antonyms. 3. Using examples of the best usage of words.
- F. Using the introduction and appendix.
 - 1. Introduction—gives more detailed knowledge of work discussed above.
 - a. Pronunciation: (1) More key words; (2) sound analysis; (3) exceptional sounds in detail; (4) equivalent sound symbols.
 - b. Spelling: (1) Prefixes; (2) suffixes; (3) rules for spelling.
 - c. Meanings: (1) Abbreviations used.
 - 2. Appendix—very different in different texts and editions, hence to be studied according to book in use. Usually contains brief encyclopædic facts.
 - a. Proper names: (1) Meanings of given names; (2) accounts of mythological characters; (3) pronunciation of geographical and other names.
 - b. Foreign phrases frequently met with in literature.
 - c. Common abbreviations.
 - d. Relation of English to other languages.
 - e. Signs for proof-reading.

II.—MATHEMATICS.

A.—ARITHMETIC.

Arithmetic is the only phase of mathematics here outlined, since it is the one generally-accepted mathematical subject taught in the elementary grades. A few schools introduce elementary algebra and geometry. Many who do not *teach* these subjects, do frequently employ literal notation, (as when using x for the unknown quantity, or in teaching a simple formula for square root,) and wisely emphasize the underlying principles of all mathematics in teaching the laws of signs, and the accurate wording of equations in explanations of problems.

As shown on pp. 261–263, arithmetic, like language, grew from social needs; in fact, it is a form of language,—the language of relationships of things,—and might even be counted a part of the English course did it not have so definite and so important a field of its own as to warrant its separate discussion. Arithmetic has not only grown out of social needs, but continues progressively to assist man in making better and better social adjustments, and consequently, like language, has the strongest possible defense for a place in the curriculum—the threefold defense of (1) found by earliest peoples to be necessary and hence developed by them, and others, to meet real needs; (2) necessary in present social life; and (3) so far as any one has vision to see into the future, always to be necessary.

As men change their methods of meeting certain emergencies, new topics develop and old ones become obsolete. The most obvious illustration is that of the formation of stock companies,

rather than of simple partnerships, when men need money to further some enterprise in which they believe. But, whatever changes may come in special topics, the *fundamental processes* are forever necessary. (Some business-men declare that if our youth were only accurate and fairly quick in the fundamental operations, they would ask no more.)

Too much cannot be said in favor of a thorough grounding of pupils in the fundamental processes, of which counting is the basis. A person who has been taught to count accurately has within his power the key to the solution of all the ordinary arithmetical processes. Adding is simply an application of counting, and can always be proved by reverting to counting. Subtraction, being the reverse of addition, can be proved by counting backwards. Multiplication is shortened addition, and, hence, through addition, reverts to counting, as division does through subtraction. It would take a long time to have to count backwards from 10395, 297 ones at a time, to find just how many 297's make 10395; yet it could be done, if the person did not know how to do long-division. Pupils in the lower grades may well be taught to check much of their work by counting, thus accomplishing two purposes: (1) Fixing the fact that counting can be reverted to, which is a great boon to pupils who leave school early, and (a) either handle in adulthood very simple numbers for which counting is sufficient, or (b) have the acumen to dig out the conventional processes, still checking themselves by counting; (2) showing that the fundamental processes developed because of man's natural inclination to find quicker ways of doing things, and, consequently, that they are worth learning well if one wants to compute rapidly.

The fundamental operations with fractions—common, decimal, and per-cent fractions—like those with whole numbers, can also be checked by counting, if one only knows how to count small portions instead of wholes.

Besides mechanical skill in computation with numbers, *imagination* is a necessary quality in conquering the subject of arithmetic. To see relationships is an essential ability; one must see relationships of quantities, to make comparisons; he must see relationships between steps in a process, to conquer the process so that it can be rebuilt if forgotten; must see relationships between situations, to recognize what unknown factor is desired; must see relationships between the desired answer and the processes, to aid him in selecting (without guess-work or trial of first one and then another) the correct process or processes to employ. Image building and holding must, therefore, be a fundamental part of all arithmetic training.

GRADE I.

Subject-Matter.—Cardinal counting, with only such other number relations as children find actual need for; that is:

Counting objects from 1 to 20 by ones; by twos; by fives.

Counting abstractly to 100 by ones, twos, fives, and tens.

Counting with symbols in the same way—laying in order cards containing the figures; or, towards the end of the year, writing the figures.

Counting backwards from 20 to 0.

Method.—The conventional consecutive number-names and symbols must be acquired imitatively. Most children can count as far as five, while many can reach ten without error, before they enter first grade.

During the first six or seven months, the counting should seem incidental to the pupils, though the teacher consciously plans to use every opportunity to create a need for counting. Children count pencils, crayolas, cards, papers, scissors, rulers, and the many other things distributed and collected during recitations or seat-work. In games, children count by twos, fives, and tens, according to the game played. In reading and language lessons, opportunities to count will arise, such as counting the wheat-seeds in a head of wheat (see p. 233), and counting the twelve clock-strokes that Cinderella hears when she stays too late at the ball. Rhymes such as "One, two, buckle my shoe"; and "One, two, three, four, five; I caught a hare alive"; help to fix number-names in sequence. Naming the digits as seen on the blackboard, finding the place in the primer by page number, laying the number-symbols in correct order for seat-work, and keeping a calendar, are a few means of teaching counting by means of written symbols. All text-books on primary arithmetic, though not necessary for class use, are suggestive to the teacher of things she can do.

During the last two or three months of the school year the teacher should test every pupil, so that if any are still unable to meet the requirements they should be given special lessons and drills.

Indefinite and a few definite comparisons will incidentally arise, but no required amount of such subject-matter should enter into the promotion standard. Some pupils will make addition combinations of their own accord, and some will readily use the ideas of $\frac{1}{2}$, $\frac{1}{4}$, and $\frac{1}{3}$. A few denominate numbers will be used, such as inch and foot, pint and quart, cent and dime, and dozen; but complete "tables" will not be taught.

Telling of time may be learned but should not be insisted upon till second grade. If this is done, Roman numerals to XII must be learned.

GRADE II.

Subject-Matter.—Counting, as in Grade I, continued. Also cardinal counting in more difficult ways:

From 0 to 100 by twos and fives, both forward and back; to 30 by twos, beginning at *any* number; from 20, backward by twos, beginning at any number; to 30, forward by threes, beginning with 0 or any multiple of 3; from 15, backward by threes, beginning at 15 or any smaller multiple of 3.

Ordinal and multiplicative counting as far as needed, probably first, second, third, etc., through tenth; and once, twice, three times, etc., through ten times.

Reading and writing all numbers of three digits; that is, to 1000.

Committing the forty-five addition facts and reversing them for the subtraction facts.

Adding of short columns of numbers of just one digit; still shorter columns of numbers of two and of three digits—no sum to exceed 999 (that is, three digits).

Relation seeing, especially in the use of simple denominate numbers necessary for daily use; dry measure, linear measure, etc.*

Use of such simple fractions as are needed in the child's daily experience: as, $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{3}$, $\frac{3}{4}$. Telling time by the clock.

Method.—By the second-grade age, children are given to exchanging things—apples, candy, toys, etc. This tendency, coupled with love of play, causes store-keeping to be a natural game for the teacher to institute. To children as store-keepers of every variety, as clerks, as delivery-boys, as purchasers, etc., every necessary transaction and attendant process of computation becomes motivated. A need is felt for learning to add and subtract, for learning to measure by means of the customary denominate-number tables, (dry, liquid, linear, time, weight, dozen, United States money, etc.,) and if the drills are brief, snappy, and constant, children will revel in the actual practice as well as rejoice over the result in their efficiency as merchants, clerks, or purchasers. The desire to get the correct result for personal reasons is a powerful stimulus to accuracy.

The methods of drill and of presentation must be such as to keep alive the child's natural love for number-work. The practical value of arithmetic must be shown to pupils by the teacher's use of practical situations both for motivating and for applying numbers and processes. Nature-study, seat-work, paper-folding, cutting, drawing, braiding, weaving, measuring, building, can all supply number knowledge. Arranging colored circles (large dots) to make domino cards, fixes the simpler addition facts. Keeping score in bean bag and racing games motivates adding and comparing.

* For suggestions see Spear's "Primary Arithmetic—For Teachers."

Because young teachers find the distribution of subject-matter into small units very difficult, a suggestion is here given them through the subdivision of the work of this year into months. Since fractions are used only incidentally, they do not appear in the outline.

First month—Review all first-grade work, and, whenever necessary, reteach facts, and drill.

Teach the Roman numerals I, II, III, V, and X.

Write numbers from 1 to 10 inclusive. ("Numbers" always to mean "Arabic" or "Hindu" unless otherwise indicated.)

Read numbers from 1 to 20 inclusive.

Do counting as indicated in Grade I by means of room administration.

Have games to train observation—and to cultivate quickness and accuracy of sight, hearing, and touch.

Teach the additive combinations, $\begin{Bmatrix} 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 2 & 2 & 2 & 2 & 2 & 2 \\ 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 \end{Bmatrix}$

If to be used, teach the signs, + (plus) and — (minus).

Second month—Keep up all review work.

Count backward, as well as forward, between 0 and 100, by twos, fives, tens.

Teach Roman numerals through XII, emphasizing the difference between IV and VI, and IX and XI.

Add the sign, = (equals), if not already known.

Continue exercises in sense training, especially in image *holding*.

Conquer the key to reading and writing all numbers to 100, by seeing that the nine digits are repeated in order in each new group, and that the new mile-posts (twenty, thirty, sixty, etc.) are also the same nine digits with a different "place-value." Use both toothpicks and one-inch squares for tying into bundles to count by tens. (This "bundling" makes good seat-work.)

Teach children to see that 16 is a 10 and a 6; 31, three 10's and a 1, etc.

Teach the additive combinations, $\begin{Bmatrix} 10 & 10 & 10 & 10 & 10 & 10 & 10 & 10 & 10 & 10 \\ 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 & \text{anything} \end{Bmatrix}$, and apply to larger numbers so a child can add 10 to *any number*.

Apply to counting by tens beginning at any number.

Teach the combinations with 9 as the common addend, helping pupils to see that since 9 is one less than 10, it is very easy to add 9 by thinking one less than the sum obtained by adding 10. (Bracketed number groups have occurred before in reverse order) $\begin{Bmatrix} [9] & [9] & 9 & 9 & 9 & 9 & 9 & 9 & 9 & 9 \\ [1] & [2] & 3 & 4 & 5 & 6 & 7 & 8 & 9 & \text{anything} \end{Bmatrix}$

Third month—Put on the board a row of numbers. Say to pupils, "Read from left to right. Read each *one-larger*; *two-larger*." Repeat, from right to left.

Count forward to 30 and back from 20, by twos, but beginning at any number, odd or even.

Tie up bundles of tens to make hundreds, and apply knowledge gained in reading and writing numbers from 20 to 100 to reading and writing numbers containing any hundreds' digit. Prevent the common error of reading 256 (two hundred fifty-six) as it if were two numbers, 200 and 56.

Read the Roman numerals on several clock-faces. Note how they are placed.

Each child should make a clock-face.

Tell time by the full hours only. Show on clock-faces where the hands (represented by two toothpicks, one shorter than the other) should be if it is two o'clock; five o'clock; seven o'clock, etc. On the teacher's large clock-face, one child may make the hands show whatever hours he chooses, for others to name.

Sense-training and image-holding continued.

Teach the additive combinations $\left\{ \begin{array}{l} [3] \\ [1] \end{array} \begin{array}{l} [3] \\ [2] \end{array} \begin{array}{l} 3 \\ 3 \end{array} \begin{array}{l} 3 \\ 4 \end{array} \begin{array}{l} 3 \\ 5 \end{array} \begin{array}{l} 3 \\ 6 \end{array} \begin{array}{l} 3 \\ 7 \end{array} \begin{array}{l} 3 \\ 8 \end{array} \begin{array}{l} [3] \\ [9] \end{array} \begin{array}{l} [1] \\ [1] \end{array} \begin{array}{l} [2] \\ [2] \end{array} \begin{array}{l} [3] \\ [3] \end{array} \begin{array}{l} 4 \\ 4 \end{array} \begin{array}{l} 5 \\ 5 \end{array} \begin{array}{l} 6 \\ 6 \end{array} \begin{array}{l} 7 \\ 7 \end{array} \begin{array}{l} 8 \\ 8 \end{array} \begin{array}{l} [9] \\ [9] \end{array} \right\}$

Teach the sign, \times , if desired for use in writing or in indicating doubles given, as two threes (2×3), two eights (2×8), etc. The sign should not be called "times," since the multiplication indicated is merely incidental. In the same way, incidental division may be taught, as in asking what two equal numbers make 10, 8, etc.

Introduce one-step problems in addition, subtraction, and multiplication, using any facts learned to date; for example, "I had 37 cents in my bank and added a dime. How much had I?" "What will two pencils cost @ 5c each?" "At 4c each?"

Fourth month—Count by threes forward to 30, beginning at 0 or at any multiple of 3. Same backwards from 15.

Put on blackboard, in either a horizontal row or in a vertical column, about five numbers (only three or four, if five are too many). Say to children, "Look at blackboard. Face the other way. Read what you saw—top to bottom, bottom to top; or, left to right, and right to left. Face the front. Look again. About face! Read (without looking) from left to right, each number *three larger*." Put on a new set of numbers and repeat; with each, read *three smaller*; *two*, or *one*, *larger*, or *smaller*, for review.

Review all preceding combinations, keeping record of children's errors and speed. Drill on all difficult cases.

Add a group of combinations which demands no number-thinking but does help to fix the zero value—

$\begin{array}{cccccccccc} 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\ 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 & \text{anything.} \end{array} \left. \vphantom{\begin{array}{cccccccccc} 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \end{array}} \right\} \begin{array}{l} (0 \text{ to be read } \textit{naught}, \text{ not } \textit{ought}.) \end{array}$

Tell time by hours and half hours only. Teach the signs, \$ and c, if needed.

Continue sense training and ratio seeing in connection with foot and yard, halves of units, etc.

Write numbers in columns for convenience in adding, so that ones come under ones, tens under tens, hundreds under hundreds, even when numbers of all three lengths occur in one column.

Fifth month—Keep up all previous work.

Count by ordinal numbers—first, second, third—to twenty-fifth, or farther. Or start at the seventieth and count to the ninetieth—a good review of cardinal counting.

Teach the new combinations: $\left\{ \begin{array}{l} [4] \\ [1] \end{array} \begin{array}{l} [4] \\ [2] \end{array} \begin{array}{l} [4] \\ [3] \end{array} \begin{array}{l} [4] \\ [4] \end{array} \begin{array}{l} 4 \\ 5 \end{array} \begin{array}{l} 4 \\ 6 \end{array} \begin{array}{l} 4 \\ 7 \end{array} \begin{array}{l} 4 \\ 8 \end{array} \begin{array}{l} [4] \\ [9] \end{array} \right\}$

Read rows or columns of numbers *four larger* or *smaller*. Use other devices for seat-work and drills in applying these combinations.

Have a large calendar in the front of the room. Teach children to use it and to date all papers by it.

Sense-training, image-holding, and ratio-seeing, made harder.

Encourage children to make up problems and to *see* problems in various statistics that interest them. For example, how many children present, due, absent? Or reverse. How many children can be supplied with two apples each from a basket containing 26, 14, 32, etc.? (Children count by twos to find out.)

Adapt to threes, fives, tens, by changing to blocks, candies, pennies, dimes.

Whenever it is possible to use the terms *add*, *subtract*, *sum*, *difference*, etc., rather than the general expressions, *work* the example and get the *answer*, do so.

Sixth month—Keep up all previous work.

Drill on all hard combinations. Keep individual records of scores as to number correct or as to speed in all forms of drills.

Add these combinations, as new, $\left\{ \begin{array}{cc} 5 & 5 & 5 \\ 6 & 7 & 8 \end{array} \right\}$ $\left\{ \begin{array}{ccc} 6 & 6 & 7 \\ 7 & 8 & 8 \end{array} \right\}$ and *master* them.

Review the denominate-number tables used in first grade by playing store.

Ratio-seeing emphasized. Count by the earliest multiplicative numbers.

Tell time by hours, half-hours, and quarter-hours.

Seventh month—Count by fours to 20; forward and back.

Apply number facts learned in the sixth month.

Begin teaching column addition—of one column only.

Tell time by use of the five-minute divisions.

Add liquid measure and United States money to the earlier denominate-number tables learned.

Secure greater initiative in ratio- and image-seeing and -holding, and in problem-making and -solving.

Eighth month—Continue all lines of work begun in preceding months, working for clearer insight into relations and surer control of mechanics.*

Add to the denominate-number tables that of time. Drill on the number of days in a month, days in a week, hours in a day, minutes in an hour, seconds in a minute.

Let all pupils who can do so, tell time by minute intervals, but do not fret over those who can't.

To column addition of ones, add that of tens, and even hundreds, provided the sum does not exceed three digits (except for children who know larger numbers anyway).

Ninth month—Check children to see that each has the work of the year up to standard in power to image and in control of facts. Work to attain the standard.

An experimental study† to determine the difficulties in addition and multiplication shows that out of more than one thousand pupils who were tested, before and after drill, 51 to 95 pupils missed these combinations, $\left\{ \begin{array}{cccccccc} 9 & 7 & 8 & 8 & 8 & 9 & 9 & 9 \\ 4 & 5 & 6 & 5 & 7 & 6 & 7 & 8 \end{array} \right\}$

whereas 21 to 50 pupils missed these: $\left\{ \begin{array}{cccccccc} 2 & 7 & 5 & 9 & 6 & 6 & 7 & 8 & 8 & 8 & 9 & 7 & 9 & 7 \\ 1 & 2 & 3 & 9 & 5 & 4 & 3 & 4 & 8 & 3 & 3 & 4 & 5 & 6 \end{array} \right\}$

It would appear that the combination of 9 with numbers, had in no way been associated with 10, (see second month's outline,) or the combinations containing 9 would scarcely have been missed so often. At any rate, the teacher must meet the needs of individuals as well as of the class as a whole.

If pupils are able to do it, teach subtraction (by the addition or Austrian method) with numbers of no more than three digits.

GRADE III.

All work done in grades I and II must be kept fresh through *use* in practical and interesting situations. The same lines of work must be *extended*, to meet children's growing abilities:

Writing and reading numbers of four, five, and six orders, possibly even seven orders, because of some specific need.

Greater content put into large numbers through the use of bundles of tooth-picks—ones tied to show tens; tens tied to show that a hundred equals ten tens; etc. Let pupils push to one side on their desks the necessary bundles as the

* See devices for drill, p. 279 ff.

† Made by Dr. H. V. Holloway, Trenton, N. J. State Gazette Publishing Company.

teacher shows a card containing different numbers like 279; 432; 1645. Or, reversing this, let the teacher or some child show bundles and others write the number in figures, on blackboard or on paper.

Addition and subtraction with any-sized numbers must now be mastered, although practice will be necessary in all succeeding grades. The teacher should not harp on children's errors, but should frequently test* their progress and then bring up deficiencies.†

In the third grade the necessity of finding the sum of several *equal* addends, as when a merchant buys from a wholesale dealer, or when he makes out his bills to customers, causes a real need for a quick way to add *equal addends*, the answer to which problem is found in *the study of multiplication, the new work of this grade*.

Pupils having to find the cost of seven dozen oranges at 45c a dozen, and knowing only the addition way to find the result, put 45c down the column to be added. If there is rivalry in speed, 45c several are sure to use some quick method, possibly saying 5 45c fives are 25, and then *adding* from that point on—30, 35. In 45c a similar way some one knows 3 fours, perhaps doubles that 45c sum, and then adds 4, getting 28 for the sum of the seven 45c fours, before adding the 3 tens from the 35 of the one's col- 45c umn. A little questioning of the quickest children will disclose to all the class the value of a short way. The teacher may then give the briefer expression for this, and lead pupils to see just *how* the product is obtained. The need for speed will make pupils want to conquer their "tables," which, by the way, should be presented in the order of their least difficulty rather than in numerical order: 2, 1, 10, 11, 5, 9, (0), 3, 4, 6, 7, 8, 12.‡

During the process of conquering the tables, many applications will demand the multiplication *by one digit* of rather large numbers. As soon as there is a need for teaching how to multiply by a number of *several* digits, teach it. One child once said to his teacher at just the right time, "I do wish I knew how many seconds old I am." The teacher assured him it was an easy thing to find out, and by the time the multiplications needed in reducing years to months, to days, to hours, to minutes, and then to seconds, were accomplished, every child in the class knew how to do "long multiplication"; and as every child was interested in his own age and in comparisons between his and others' ages in seconds, the "drill" took care of itself.

Applications of multiplication will be found in the development of square measure, particularly in the finding of rectangular and

* See pp. 292-295 this Course of Study.

† So many excellent drill-cards, sheets, tablets, or booklets, are now available for reasonable sums that the teacher of today need not waste valuable hours in making drill-cards, once so necessary.

‡ See "The Multiplication-Tables," published by Flanagan, Chicago, 10c., and Holloway's study referred to on p. 110.

triangular areas. Also in the making out of bills in store-keeping, and in measuring and computing the cost of certain materials used in industrial work.*

Short-division is taught incidentally in drill upon the multiplication-tables, as when the teacher asks such questions as, How many sixes in 42? In 36? In 24?

Nature-study, games, the industrial work, excursions, the study in home life of the preparation for winter, in canning fruit, buying fuel, etc., will suggest innumerable concrete and practical problems for third-grade pupils to make and to solve.

Ability to *hold images in mind* for use in comparisons should continue to be increased. Ratio or relationship seeing, as indicated on p. 105, is a vital factor in arithmetical power, and should be used whenever possible. A set of cards containing expressed ratios, in connection with each multiplication-table as taught, is a helpful device. The child who looks at $3/12$ and thinks one-fourth and at $12/3$ and thinks four, is laying a good foundation for later problem-work.

Third-grade pupils should learn to write and read the simplest common fractions ($\frac{1}{2}$, $\frac{1}{3}$, $\frac{2}{3}$, $\frac{1}{4}$, $\frac{3}{4}$, at least), and to feel sure that each means something to them, through seeing the indicated relations in lines, surfaces, and objects about the room or home.

Before the work of the grade is complete, children should know *how* to check or prove the correctness of their own work, and also to have started to form the *habit of always doing so* before feeling satisfied to submit the work to the class or to the teacher.

The third grade is none too early to start another good habit—that of casting the written solution into a form that will save time and insure clear thinking; such, for example, as: Given; Desired, or Required; Solution, or Work; Check, or Proof. True, this form can become stereotyped and meaningless; but it need not become so, and is one way of helping pupils keep their imaging clear and their mechanical work up to standard.

GRADE IV.

All processes taught in preceding grades must now be done with greater speed, greater accuracy, and with more difficult numbers.

The mastery of the process of *long-division is the new work of the year*. This necessitates daily drill on the multiplication-tables and upon such questions as,—How many nines in 67? In 75? In 71?—as a preparation for division. Long-division should be approached through analyzing what has been done by pupils in short-

* A pamphlet on "The Social Motive in Arithmetic," by James F. Millis, describes work done at "The Francis W. Parker School," Chicago, and shows how children cared for about a dozen chickens, bought feed, sold eggs, and kept their accounts.

division, and finding that four steps, repeated over and over again, are all that must be known. These steps are:

1. *Estimate* (how many times the divisor can be found in the partial dividend necessary to use).
2. *Multiply* (the divisor by the estimate made).
3. *Subtract* (the product of the divisor and quotient figure [or estimate] from the partial dividend used).
4. *Bring down* (the next figure of the dividend, to be placed at the right of the remainder, all of which now becomes a new partial dividend with which the steps, estimate, multiply, subtract, and bring down, are again used).

When the steps are once secured from an analysis of a short-division example, pupils should test their use of the steps with divisors like 21, 71, 31, 51, 61, so that the ones' digit will not often alter the first estimate. Next, pupils should be given 39, 49, 89, 29, etc., as divisors, so that the ones' digit is sure to change the quotient estimate, even to the extent of needing to think 40 for 39, 30 for 29, 70 for 69, etc., in making the estimate. After this the divisors should be 32, 52, 92, and so on; 78, 68, 28, etc.; 43, 83, etc.; 97, 47, etc.; until 25, 35, 45, etc., are reached. The general order of procedure will by this time be well fixed, and teachers need only to look out for individual errors such as putting too many naughts in the quotient when the child has once learned to put any there; having a remainder large enough to contain the divisor once more and not recognizing the fact, but writing a *one* in the quotient before continuing; and similar errors. As soon as the process is mastered so that accuracy is assured, pupils may work for speed—both in dividing and in checking results.

Apply standard tests in all the fundamental processes, and encourage pupils to take pride in being up to standard.

A visit to any industry will provide statistics from which pupils will love to make problems the solution of which will demand the use of the fundamental processes. For example, during a visit to one of the Ely iron mines, the author heard how many loads of six tons each were hoisted a day by 225 men; how many tons of ore were shipped annually; how many men worked in each shift, and for how many hours; what pay each class of men received; the annual number of posts used for props in the mine; the number of posts shipped in on one flat-car; and so on through a long list of interesting statistics. Minnesota state reports and government reports also contain valuable statistics about industries and resources.*

Forms for stating problems in both oral and written work must be developed and adhered to as a means of clearer thinking as well as of better oral expression and of neater written-work.

* Miss Deming's new book, called "Number Stories," about "Ralph," and "How He Helped," will be invaluable to teachers of fourth grade and above.

Puzzles and arithmetical games such as occur in current juvenile magazines may frequently be used with profit. A few illustrations follow:

(1) Write on your paper any number. Double it. Add 4. Multiply this sum by 5. Add 12. Multiply by 10. Subtract 320. The teacher then asks several children in turn to read their results. Each time the teacher says, Was your original number —? (giving as her answer the child's result with the two right hand digits mentally omitted). If the child says "no," the teacher says, "Then your work is incorrect." As no two children have chosen the same original number, they wonder how the teacher knows. Later, the plan may be explained.

(2) Think of a number. Double it. Add 10 (or any even number which the teacher chooses). Take one-half the sum. Subtract the number of which you first thought. Your answer should be 5 (or half of whatever number the teacher announced). This can be varied in many ways.

(3) Write a number of several digits. Add the digits mentally and subtract that sum from the original number. Rewrite the number, omitting any one of the digits. Now add the digits. When this sum is named to the teacher, she says, "You omitted 7 (or 6, or 5, etc.) from your number." She knows, because she mentally subtracts the sum named by the child from the nearest higher multiple of 9.

Pupils should be helped to fix the habit of checking or proving all work done at their seats.

From fourth grade on "there should be a great deal of mental arithmetic—not for the number combinations, but that children may learn to understand and to use ideas and words in reasoning."* *Quick* oral work is valuable; in one grade, where just three minutes a day were given, questions like these were once heard: "Begin with 5; multiply by 6; add 2; add 4; think of the result as pints of milk; reduce to quarts and sell at 5c a quart." After a similar series of mechanical steps, the teacher said, "Think of them as carnations and sell at 50c a dozen."

If given orally, the teacher's voice punctuates such a series of different operations to be performed. But if teachers write on the board examples involving several operations, the mathematical "law of signs" must be learned and obeyed. For example, to each of these there is but one *correct* result: $99 \times 2 - 27 \div 3 + 4 \times 4 - 24 \div 4 = ?$ $21 + 9 \div 3 - 8 \div 2 + 3 \times 5 = ?$ $3 + 4 \times 8 - 10 \div 2 - 60 \div 6 = ?$ Children who do not know that *Indicated multiplications and divisions must be performed before any sums or differences are found*, will obtain several different answers. In cases where only multiplication and division are indicated, as in, $16 \div 4 \times 2 = ?$ and $5 \times 30 \div 3 = ?$ the law says, *Perform the indicated operations in the order in which they occur.*

* President John A. H. Keith, Indiana, Pennsylvania.

See p. 262; fourth-grade pupils should complete the outline through B under II, and such parts of C as are needed, although whatever work is done in fractions should be of a simple nature.

GRADE V.

As is said on p. 263, the school must distribute the arithmetic subject-matter so that pupils who leave school *early* will have had time to secure from the subject two things: (1) Knowledge of how needed processes should be done, which gives children a sense of power; and (2) practice in using each new acquisition until they have perfect control over it. Therefore, besides doing the new work of the grade, it is quite essential that all power gained in earlier grades be kept up to standard. This means systematic though not necessarily daily drill on the fundamentals, on thought processes involving the holding of images while ideas are related, and upon good oral and written expression. The proper use of *since*, *therefore*, *hence*, *if*, *is* (instead of *would be* or *will be*), *each*, and other needed expressions, should be fixed early.

The reviews should include the re-teaching of facts where this is necessary, as well as the extension of principles learned in earlier grades to more complex conditions. Some such facts are:

- (1) Reading and writing numbers of as many as seven to ten orders.
- (2) The larger use of Roman numerals in encyclopædias, chapter numbers, dates on buildings, etc.
- (3) The addition to the denominate-number tables already learned of such facts as will be necessary in the study of fractions and of the problems of the grade. This will include the table of time and should probably extend to a study of the relation of longitude to time as needed in geography.
- (4) The four fundamental processes with their accompanying number facts.
- (5) Knowledge of how to prove the correctness of results in mechanical work and how to check-thinking by making rough estimates of the result.
- (6) Better forms for stating problems and solutions, as thinking grows more accurate.
- (7) Ability to make problems from real situations, and to interpret problems because the situations can be clearly imaged since they are based upon children's experiences either direct or dramatic.

The new work of the grade is the application of the fundamental processes to *fractions*. See p. 262, II, C. A suggestive outline of steps follows:

FRACTIONS.

NOTE: The general order of development to be used with each topic is:

- (1) Create a vague and then a definite feeling of need for some process.
- (2) Teach the process by getting as many suggestions from pupils as possible.
- (3) Drill on the mechanical phases until children have control over them.
- (4) Apply knowledge and power to new situations to prove value and to give further drill in the using of ideas.

I. Meaning.

A. Meaning of a concrete *fraction*.

1. In popular speech—a piece, part, broken section, fragment, etc.
2. Word: how related to *fracture*, *fragment*, and *fragile*.

3. How recognized from a whole?
 - a. Only by knowledge of the whole.
 - (1) Illustrated with a rectangle, which may be a whole or may be half of a square.
 - (2) Illustrated in many life situations, where little parts of things are interpreted as wholes.
 - (3) Illustrated by circles, etc., where the whole is so individual as to let almost any fraction of it be recognized.
- B. Meaning of the topic, *fractions*, in arithmetic.
 1. Developed from social situations, because of—
 - a. Need of economy. b. Need of accuracy. c. Need of beauty.
 2. Measuring and comparing pieces of things with one another and with wholes resulted in two things:
 - a. Development of denominate-number tables.
 - b. Topic "fractions" in arithmetic.
- C. Meaning of symbols for measured fragments, or fractions.
 1. Oral.
 - a. Terms of indefinite comparison.
 - (1) Longer, wider, taller, etc. (2) Shortest, brightest, etc.
 - b. Terms of definite comparisons.
 - (1) Halves, thirds, sevenths. (2) Twice, thrice, seven times.
 2. Written.
 - a. The fraction as a whole.
 - (1) An expressed ratio (as of 3 inches to 4 inches).
 - (2) An expressed division to be done (18 divided by 23).
 - (3) A quotient (after dividing).
 - (4) A sign of partition—may mean three quarters of one whole or it may mean three one-fourths, each one-fourth taken from a different whole.
 - b. The terms of the fraction, etc.
 - (1) The numerator. (2) The denominator. (3) The separating bar.

II. Processes employed.

- A. With small fractions—such as halves, fourths, eighths, thirds, and sixths.
 1. Indefinite relations seen.
 2. Definite comparisons made.
 - a. Recognition of parts in relation to wholes.
 - (1) Of children in a class, books on a table, panes in a window, crayon, and many things about home and school.
 - (2) Of geometric figures. (a) Lines. (b) Rectangular surfaces. (c) Circles. (d) Solids.
 - b. Representation of definite parts by written symbols.
 - c. Reduction or changing the form of expressing a given fractional value.
 - (1) Do concretely—actually cut up thirds and halves, for example, so they may have the common name, sixths.
 - (2) Do with symbols and prove by concrete.
 - (3) Do accurately and quickly with symbols. Use only fractions that can be reduced by inspection of denominators.
 - d. Addition of small fractions.
 - e. Subtraction.
 - f. Multiplication.
 - g. Division.
- B. With larger (or any size of) fractions—the same processes, but rules or formulæ now seem to be needed to save time. Pupils work out own rules in most if not all cases. Begin with knowledge of processes with smaller fractions; refer to the concrete to keep meanings clear and to prevent mere "juggling with figures."
 1. Reduction, changing the *form* only, of a fraction, or of any number.
 - a. To higher terms.
 - (1) Develop the fact that to multiply by 1 does not change the value of the multiplicand.
 1×7 equals ? $1 \times \frac{2}{3}$ equals ? $1 \times \frac{4}{5}$ equals ? etc.
 - (2) *One* may be written in various ways. Develop. Children give $4/4$; $7/7$; $6/6$; $99/99$; $25/25$; etc.

- (3) Teacher points to magnitude ($\frac{1}{2}$, for example), and asks, "How many fourths in this?" "How many sixths?" "Eighths?" Teacher then writes, " $\frac{1}{2}$ equals $\frac{2}{4}$; $\frac{1}{2}$ equals $\frac{3}{6}$; $\frac{1}{2}$ equals $\frac{4}{8}$." "The value is unchanged in each case. Which form of 1 has been used as a multiplier in each case?" ($\frac{2}{2}$ in 1st; $\frac{3}{3}$ in 2d; $\frac{4}{4}$ in 3d.)
- (4) Try with other magnitudes; for example, how many sixths in $\frac{2}{3}$? Twelfths in $\frac{2}{3}$? Eighths in $\frac{3}{4}$?
- (5) Discover what determines the form of 1 to use in each case. (The *name* or *denominator* of the new fraction.) "Then if I ask you to change $\frac{2}{3}$ into 15ths, what must you do? Why?"

NOTE: Cautions to teacher: (1) Be thorough in this step. (2) Do not let children write or say $\frac{1}{2} \times 3$ equals $\frac{3}{6}$, but insist upon $\frac{1}{2} \times \frac{3}{3}$ equals $\frac{3}{6}$.

- (6) Give much practice until children can finally *think* the form of 1 *without writing it*.
- b. To lower (or lowest) terms.
 - (1) Show that reduction to lower terms is the reverse of the above— $\frac{12}{15} \div \frac{3}{3}$ (a form of 1) equals $\frac{4}{5}$.
 - (2) Quick practice-work should follow until children can change the form of any *small* fraction instantly to higher or lower terms.
 - (3) Apply to larger fractions and *give much practice*. Show how one may divide by 1 several times in succession, as in reducing $\frac{192}{240}$ to lowest terms.
- c. To an integer or a mixed number.
- d. To a fractional form.
 - (1) Employed with whole or mixed numbers for convenience.
 - (2) Some times called "improper" fractions, but not *fractions* at all—just wholes in *fractional form*.
2. Addition.
 - a. Applies the principles of addition of integers, hence reduction to a common denominator is necessary.
 - (1) Found by inspection.
 - (2) Found by factoring and the learning how to secure the least common multiple (of small fractions only).
 - (a) Rules for recognizing a number's divisibility by 2, 4, 8, 5, 10, 3, and 9, easily learned.
 - b. Formula found.
 - (1) Reduce fractions to be added to a common denominator, which becomes the denominator of the sum.
 - (2) Add numerators of the "reduced" fractions for the sum's numerator.
 - (3) Reduce the sum to form desired.
 - c. Work for neatness of form, accuracy, and then dispatch.
 - d. Apply to problems in merchantry—using denominate-number tables, making out bills of goods, etc.
3. Subtraction.
 - a. Same principles as those learned in addition of fractions and in subtraction of integers.
 - b. Order of introducing the different situations in subtraction.
 - (1) Fraction from fraction.
 - (2) Fraction or mixed number from mixed number whose fractional part is larger than the fraction in the subtrahend.
 - (3) Same, but with fraction in minuend smaller than fraction in subtrahend, so that the student must take a one of the integer and change it to a fractional form before proceeding.
 - (4) Same principle applied to subtracting a fraction or mixed number from an integer.
 - c. Make applications to life situations.
4. Multiplication.
 - a. Refer to simple fractions.

- b. Refer to use of multiplier in reducing fractions, about which nothing was said at the time.
 - c. Process derived.
 - (1) Multiply numerators for numerator of product.
 - (2) Multiply denominators for denominator of product.
 - (3) Reduce to form desired.
 - (4) Cancellation shortens the process.
 - d. Different forms discussed.
 - (1) Fraction by fraction.
 - (2) Fraction by whole number.
 - (3) Fraction by mixed number.
 - (4) Large whole number by fraction or mixed number; for example, $6489 \div 25\frac{2}{3}$
 - e. Drill.
 - f. Apply to problems within the experience of the pupils.
5. Division.
- a. Natural method is to reverse process used for multiplication. Easy when divisions produce no remainders; when remainders occur, some new plan becomes necessary.
 - b. Method of reducing to a common denominator, as in subtraction, of which division is a shortened process.
 - c. Plan of inverting terms of the divisor and proceeding as in multiplication, invented.
 - (1) Fits all cases.
 - (2) Proved correct in many ways, but not necessary that pupils should prove the truth each time.
 - d. Drill on some *one* way to give children control of the process.
 - e. Apply principles of multiplication and division so as to secure the "laws of fractions," namely:
 - (1) Multiplying only the numerator of a fraction, multiplies the fraction.
 - (2) Multiplying only the denominator of a fraction, divides the fraction.
 - (3) Dividing only the numerator of a fraction, divides the fraction.
 - (4) Dividing only the denominator of a fraction, multiplies the fraction.
 - (5) Performing either operation by the same number on both numerator and denominator does not change the value of the fraction; it merely reduces the fraction to another form.
 - f. Apply to problems interesting to pupils.

NOTE: "Complex" and "compound" fractions involve no new principles and need not be mentioned unless pupils ask for them.

GRADE VI.

The outline of Grade V should be read with care, since all of that work must be kept fresh by *use* in Grade VI.

The new work of the grade is the study of *decimal fractions*, a subject requiring only a brief time for its comprehension, but a long time for its use, since, besides laying a firm foundation for percentage, which is to follow, it thoroughly reviews and helps to fix the work of the preceding grades in common fractions and in the four fundamental processes. The problems selected for applying the principles of decimals should be chosen from the children's experience in their home environment. (See p. 262, III, B; and page 263, all of IV.) A brief suggestive outline follows:

DECIMAL FRACTIONS.

- I. Relation of decimal fractions to decimal numbers.
 - A. Our whole number-system is a decimal one.
 1. One in a given place equals ten ones of the next place to the *right*.
 2. One in a given place equals one-tenth of one in the next place to the *left*.
 3. Place-names of integers learned.
 - B. United States money uses both decimal integers and decimal fractions (of a dollar), separating the two by the "decimal-point." (A good starting place for decimal fractions.)
 - C. Place-names of decimal fractions easy to get in relation to place-names of integers—tenths to tens; hundredths to hundreds.
- II. Relation of decimal fractions to common fractions.
 - A. Just a chosen sort of common fraction, with denominator 10, 100, or *any* power of 10. Usually written without the denominator, and given place-value through the use of the decimal-point.
 - B. Reduction of common fractions to decimal fractions.
 1. Use of 10, 100, etc., as actual denominators in earliest reductions, proving that only old principles operate.
 2. Discard the actual denominators and learn to know denomination from place-value.
 3. Learn how to "carry out" a decimal fraction to several places.
 4. Aliquot parts developed; value seen; some committed to memory.
- III. Reading and writing of all sorts of decimals.
 - A. Reading any decimal by any desired decimal name, giving the right value to the numerator; for example, 3.5 may be read: Three and five-tenths (ones). Thirty-five tenths (of one). Three hundred fifty hundredths (of one). Thirty-five hundredths of ten. Etc.
 - B. Writing a number in several forms with no change in value; for example, $.07 = .070 = .0700$, etc.

$$\left\{ \begin{array}{ccc} \frac{7}{100} & = & \frac{70}{1000} = \frac{700}{10000} \end{array} \right.$$
 - C. Writing a given number—for example, 872039—five times, and then putting the decimal-point in the right place each time to name the whole: ones, hundredths, ten thousandths, tenths.
- IV. Fundamental processes applied to decimal fractions and mixed numbers.
 - A. Reduction—very simple—rule for.
 - B. Addition—no new principle.
 - C. Subtraction—no new principle.
 - D. Multiplication—actual process the same as of old. Placing the decimal-point the new thing. Rationalized by using 10, 100, etc., as actual denominators and making a rule.
 - E. Division—Like division of integers except for placing the decimal-point. Again use ordinary fractions with denominators 10, 100, etc., (1) to make a rule, and (2) to show that the rule is true. Different plans for pointing)off (aside from the mechanical process of dividing the numbers:
 1. Multiplying both dividend and divisor by the same number (a) to make the divisor an integer; (b) to make both divisor and dividend integers; (c) to give both the same denomination.
 2. First planning where decimal-point should be placed in the quotient and making a check (\checkmark) in dividend.
 3. Dividing first and then subtracting number of places in divisor from number used in dividend and placing point to accord.
- V. Application of fractions, both common and decimal, and of denominator tables, to problems found in all forms of industry. (See course in industry for complete list, a few of which are here suggested.)
 - A. Merchants' bills.
 - B. Coal hauling and cord-wood selling.
 - C. Plastering, papering, and painting.
 - D. Carpeting rooms, curtaining windows, covering cushions, etc.
 - E. House planning and carpentry processes.
 - F. Masonry, and excavating of cellars, cisterns, etc.

- G. Cubical contents of various things—cisterns, tanks, rooms (air in), haystacks, boxes, coalbins, etc.
- H. Buying lumber for manual-training or for home wood-work, and hence learning how to measure lumber.
- I. Social situations in the school, such as sending a Thanksgiving basket to a deserving poor family, or a doll-house to an orphanage.
- J. Learning to do practical banking, such as opening a checking account, writing checks, balancing the check-book and the bank-book; opening a savings account, or a "thrift" account (in which as little as one cent a week is deposited), finding how one's savings accumulate, etc.* (This is one excellent means of uniting the arithmetic of the year with civics and ethics.)
- K. See lesson on paying distant indebtedness, p. 264.

Mental arithmetic, checking the line of thought through making sensible estimates of the result, and other valuable features of lower-grade work, must not be neglected.

NOTE: Every effort possible is made to lead children to appreciate arithmetic as a tool, usable in solving important every-day problems in life. If thought wise to do so, teachers may now introduce percentage, since it is just a special kind of decimal fraction, with denominator always 100 in the same way that a decimal fraction is a special kind of common fraction expressed by other means than in common-fraction form. However, if this is done, only two problems should be taught, (1) that of finding a per cent of some number, and (2) what per cent (*or part*, expressed as hundredths) one number is of another. Although these are not too difficult for sixth grade, the whole topic of percentage if left for seventh grade makes in the fall of that year an excellent review of common and decimal fractions, and points out children's abilities in the use of the fundamental mechanical processes, so that they and the teacher know on what to drill.

GRADE VII.

Since the arithmetical *processes* are by this time well known, the remaining work, whether it be done in one, in one-and-one-half, or in two years, consists of the application of acquired facts and of imaging power to life-situations within the pupils' comprehension.

In every line of industry which pupils investigate they see that those who are engaged in the business need accuracy and speed in computation, as well as power to see beyond the present. If problems are chosen from real situations, pupils acquire in their solution not only technical skill, but also a better appreciation of the work of others. "It is the mission of mathematics in the grades to make a large contribution to the general knowledge" as well as to the arithmetical knowledge of children. Imagination is cultivated until pupils can put themselves into others' places. Pupils should delight in the "valuable thoughts gained from arithmetic." For example, to visit a mill and learn how wheat is tested before it is bought; what price is paid for various grades of the grain; what profit is made on the different mill products; what the machinery and labor cost; how many men are employed in the mill, and what specialty each has; how the product is disposed of; what place salesmen or commissioned agents have. All this not only supplies plenty of problem material in school, but gives pupils a general knowledge of one of the world's industries, which must have a future value in good citizenship.

* The Thrift Service Co., of Rockford, Ill., will either send the teacher material or direct him where to secure it. Ask at banks. Note new "U. S. Thrift Stamps."

Besides keeping up to a standard degree of facility the work of earlier grades* viz., (1) the fundamental processes with integers and fractions, both common and decimal; (2) power to see relationships; (3) acceptable expression of a problem's solution, orally or in writing; and (4) assurance of whether one is right or wrong because of well-controlled means of checking work; the seventh year's study of arithmetic should probably cover the following topics:

1. A little study of roots and powers, such, for example, as these:

- a. Knowing, as one knows his addition or multiplication facts, the second power of all numbers from 1 to 20 inclusive.
- b. Knowing, for the sake of rapid mental estimating, that the square of any number ending in 5 ends in 25 and that the digits at the left of 25 must be the product of the number represented by the digit (or digits) at the left of 5 in the original number, and a number which is just one more than this—the number represented by this digit. Illustration: $35^2 = 1225$; that is, the power ends in 25 and the digits to the left of 25 are the product of 3, and $3 + 1$ (or 4). Note other cases such as $195^2 = 38025$ (that is 19×20) with 25 annexed. Pupils are thus able to estimate products which they cannot *accurately* secure mentally. For example, a collector's returns to the telephone company from a district which contains 127 subscribers each of whom pays \$1.25 a month is about \$156.25 (12×13 with 25 annexed, and decimal-point correctly placed). Since, actually, there are just two more subscribers than the estimate made by "squaring" 125, the pupil can add \$2.50 to the estimate and thus obtain an *accurate* result without pencil and paper.
- c. Knowing perfectly the third powers of 2, 3, 4, 5, and 10, and possibly of 6, 7, 8, and 9.
- d. In the same way knowing the fourth power of 2, 3, 4, 5, and 10.
- e. Also the fifth power of 2 and of 3.
- f. Also the sixth power of 2.
- g. Knowledge of how to extract the square root of *any* number, *if* some need of this is discovered in mensuration calculations.
- h. Knowledge of how to factor so as to get the approximate (if not accurate) third, fourth, or other roots that are only rarely needed.

2. Some simple geometric or mechanical drawing *if* needed in mensuration problems. For example, bisecting and trisecting lines; describing a circle with a given radius or diameter; constructing an equilateral triangle of a given size; erecting a perpendicular to a given line at any desired point; and so on.

3. If not already learned in lower grades, how to *keep accounts*—farm, household, or personal; how to take an inventory so as to know one's financial status; how to make out, send, collect, and receipt bills; how to save (thrift); how to proceed in simple banking for one's self; the advantages of being a bank depositor; and so forth.

4. Percentage and such applications as the teacher chooses to give in seventh grade, probably—

- a. Partnership, *without* time as an element.
- b. Profit and loss.
- c. Discount.
- d. Interest, with the making of notes; giving, recording, and releasing mortgages; and such other related problems as the pupils can well understand.

If arithmetic is to end in the seventh grade, a somewhat greater variety of work must be undertaken than is necessary if a half or a whole year's work in eighth grade is to follow. All the topics of elementary-school arithmetic beyond the sixth grade can, by variation in method of attack, be made to fit either seventh or eighth grade, so that the division of subject-matter just made is by no

* See pp. 292-295.

means hard and fast; it is meant to be merely suggestive. Pages 262-263 show the general line of work to be done in both grades seven and eight.

As was said on p. 114, *percentage* is the study of only one sort of decimal fraction—a sort found so convenient in man's adjustments to social conditions as to warrant its being made a separate topic in arithmetic.

Method.—In the study of percentage, there is little need, if any, of confusing pupils with the terms *base*, *rate*, and *percentage*, or the old-time *cases*. Of course, if one *needs* to use the words *rate* and *percentage*, they should not be avoided. Finding the per cent of a number is only a new way of asking for a given part of a number the method of solving which has been already learned in fractions (both common and decimal). Frequently to say *hundredths* instead of *per cent*, until the latter word has a real content to the pupils, will tide over many difficulties. The recognition of the fact that the common fractions called "aliquot parts" were chosen because the equivalent common fractions for these per cents were so often more convenient than the per cents themselves, again makes pupils see that to find a per cent of a number is no different in principle from finding $\frac{1}{2}$, $\frac{1}{3}$, or $\frac{3}{4}$ of the number.

In the same way, through common fractions, pupils can see what it means to find what per cent one number is of another. Examples similar to these may be given for the earliest work:

- (1) Eight equals what part of 24? What other ways may we give this part? Then, in quick drill, eight equals how many sixths of 24? How many twenty-fourths of 24? How many twelfths of 24? How many thirds of 24? How many hundredths of 24? Eight equals what per cent of 24?
- (2) Six equals what part of 60? Six equals how many tenths of 60? How many twentieths? How many sixtieths? How many hundredths? What per cent?

Finding the per cent which one number is of another, if the teacher is pressed for time, may be omitted here and brought up under "*investments*," in eighth grade.

Since several very excellent modern texts in arithmetic are arranged to apply percentage to social situations which make for better citizenship, little more need be said on the method side of the subject. Pages 265-267 of this Manual contain one plan for teaching interest.

GRADE VIII.

Since this is but a continuance of the work of Grade VII, the plan there outlined should be read in detail.

The new topics to be taken up are:

1. COMMISSION.—Related to merchantry or to exchange of products. Note the need of a salesman, agent, or commission merchant. Relate to geography and note the world's great centers for handling certain products (iron, flour, railroad securities, apples, oranges, rice, coffee, etc.)

2. Investments.

- a. Savings accounts at the bank.
 - (1) Regular amounts.
 - (2) "Thrift" plans.
 - (a) Progressive amounts.
 - (b) Reducing amounts.
- b. Notes well secured.
- c. Buying a home on time payments—through a realty company, through a building association, through a "thrift" savings account, etc.
- d. Stocks and bonds.

"The subject of stocks, as taught from the speculator's standpoint, should be eliminated, and new material under the same head substituted, the new material to deal with the new line of coöperative enterprises now so common; such as creameries, insurance companies, shipping associations, and the like. In the same way, eliminate the study of bonds as now given, and under the new topic of bonds teach municipal bonds, state bonds, popular subscriptions, and other bonds of this nature."*

"Pupils should be taught what a corporation is, its chief officers, how it is organized, what stocks and bonds are, and how dividends are declared and paid, in so far as such knowledge is needed by the general public. The study of technicalities of the broker's office should not be undertaken by pupils of this age. The newspaper stock reports furnish an excellent basis for practical problems. Show how the nation, the state, the county, and the city, issue bonds as means of borrowing money. Show how bonds may be purchased as an investment."[†]

- c. The interpretation, in all investments, of data, statistics, and graphs.

3. Insurance.

- a. As one form of investment.
- b. Personal or life insurance—different kinds.
- c. Property insurance (see pp. 267-271).

4. Taxation for the sake of group-needs—local, state, and national.

"Problems in the cost and support of the Government should be designed (a) to maintain and increase efficiency in the essential processes of arithmetic through constant application; and (b) to convey information concerning matters of local or national interest of which all citizens should have some knowledge. This aspect of the work is designed to correlate with the work of the civics class."[‡]

The courses in all of the eighth-grade subjects are in large measure designed to help boys and girls to a better understanding of the vocational life into which they are soon to enter. In the right interpretation of life adjustments, arithmetic plays an important part. Each problem demands that the child use the series of factors discussed under good study (pp. 263-266 and 283-285), though here differently worded; namely:

1. *Understand*—Read and reread; image the situation; relate the ideas one to another; and again read and reread if necessary until the problem is understood.
2. *Think*—Analyze the situation; think clearly what is wanted, what is known, and what it is best to do (that is, choose a good method).
3. *Do it*—Work quickly and accurately; in computation an answer is right or wrong—there is no *partly right* to be considered in the test of *doing the work*. Next, work economically; learn business methods of computation with short cuts which can be understood.
4. *Check the result*—Feel sure of yourself—grow independent of others' estimates—do it again—do it another way—know that you can be depended upon.

* From Bulletin No. 51, on the Elimination of Subject-Matter.

† From 1915 Cleveland, Ohio, Course of Study.

‡ From May, 1913, *Atlantic Educational Journal*.

5. *Apply the knowledge gained* to some new situation. For example, after watching a man put coal into your father's cellar, noting how often he stoops, how heavy a shovelful or basketful of coal he lifts at each movement, how many bushels he stows away in an hour, what energy he has expended, and so on, What is your attitude towards the man? Could we get along without such helpers? Can you make his task any easier?

Method.—At the Francis Parker School, in Chicago, some eighth-grade pupils built on the schoolgrounds an actual playhouse, thus learning most of the processes mentioned in upper grades. This scheme isn't possible in all localities, but the following plan, partially executed by one eighth-grade teacher,* is feasible:

This plan is to unify all the work outlined for the grade and to review the work of earlier grades by permitting the pupils to enter imaginatively into the owning and furnishing of a home. The buying of the lot necessitates a study of: (1) The city's industries. (2) Its probable development, as based on statistics about the city itself and about the industries most prominent there. (3) A forecasting of which sections will prove good residence sections and which good business sections—estimated by securing data on recent rates of property-increase or -decrease in different neighborhoods, and how differently a man looks at residence property and at business property as to any desired increase in value, etc. (4) Methods of transferring property; the legality as different from the ethics of written over verbal promises; the need of a clear title, and of a recorded deed to prevent future trouble. (5) The calculation of the real-estate agent's commission and of fees paid to the notary, the recorder, etc.

Before the house can be built it must be roughly planned to suit the family which is to live in it, and a general estimate secured from some contractor or book of plans. Then follows a careful study of plans to fit the finances of the family. Then follows a study of ways and means of paying for the home, since it can't be bought at one payment; how different members of the family can help; and the calculation of what each can save by various forms of investment. Then all pupils draw plans, estimate the cost of excavating, of building the foundation; of the lumber, plumbing, heating, cementing the basement, laying the walks, and so on for all the details. Before or after all plans for buildings are settled, the building laws must be investigated, and a permit secured.

To hasten over further details, the house is built; insured; assessed; paid for in instalments by the help of each member of the family; and, after careful calculation as to the cost of papering, carpeting, etc., furnished completely. Discounts are secured on some articles because some members of the family are employed in stores where these articles are sold. Then comes the running of the house; the budgeting of expenses; the keeping of accounts, including what is saved by the various members of the family who learn how to run the furnace economically; how, in spare hours, to clean the trap in a sink-drain, to pack a faucet, to repair a screen or an occasional broken glass, to paint a porch, to cook, sew, or raise vegetables and chickens.

Accounts are balanced once a month to see what each has been able to contribute—that is, what per cent of his earnings; what per cent of these same earnings had to be spent in clothing, in recreation, in further study or self-growth, and the like.

* Miss Violet Melander, Winona Normal School.

When the lines of thought thus opened up do not carry with them sufficient arithmetic to warrant the use of the arithmetic time for their discussion they are turned over to the civics or ethics period, for children can there calculate the social and immaterial returns which each member of the family receives from this investment in a home. In whose name should the home be? Who should inherit it? Why? What relation does participation in the home-making bear to the benefits obtained? What rights, duties, and privileges, has each member of the family? How does the hard work expended in getting this home make you feel about destroying property at Hallowe'en? And so forth, without end.

What to expect by the end of the eighth grade.—That pupils show 100% efficiency in the standard tests selected to be used.* That pupils can check their own work by some certain means. That pupils are able to image situations and to see relationships between ideas or statements in situations of which they may reasonably be expected to have some knowledge. That they use *common sense* rather than blindly attempt to recall what is to them some meaningless rule or formula. That they persist till the problem is conquered. Whether pupils know any algebra or not, they may well have learned to use x (or any other letter) to represent the sought or unknown quantity in a problem. Whether they can state any laws of equations or not, they should have learned to use these laws through practice in solving problems according to a *good form developed from accurate thinking*.

III.—SCIENCE.

Through the race's efforts at adjustment to the "material world," there have developed two very important and closely related subjects, Science and Industry. These utilize a common field of activities; but, while Industry studies the processes involved so as to develop skill in the worker and to secure a saving of time, energy, and capital, Science hunts for underlying laws or principles, and organizes around these as a core the knowledge which the race has accumulated.

With the advance of civilization and the consequent steady rise of new problems, with the increasing interdependence of men and nations, science has become differentiated into specialized subdivisions so numerous as to preclude the possibility of one individual's knowing thoroughly more than a small fraction of modern science.

The majority of men are impelled, by their interests as well as by their feeling of need in life, to secure a general knowledge of the elements of several sciences rather than to confine themselves to intensive work on one. Therefore it is that schools, whose choice

* See pp. 292-295, Chapter on Measuring Results.

of subject-matter must fit race needs,—and, in particular, elementary schools, whose pupils have neither the background nor the habits of work necessary for an intensive study of science,—must select certain typical and usable phases of all science. For this extensive and therefore necessarily elementary study of science, no single name has been consistently employed. Elementary Science would be the best name to use, did it not already carry a narrower meaning which excludes geography. It has therefore seemed necessary in this course of study to make three divisions of the general topic: A. *Geography*, from whose field material is selected and called by the generic name, *geography*, although it is no more the real science of geography than *language* is *grammar*, or than *nature-study* is *botany* or *physics*. B. *Nature-study*, selected from the wide fields of the biological and physical sciences. C. *Physical education*, made to include material chosen from several fields.

A.—GEOGRAPHY.

The present meaning of geography,* the modern methods of teaching the subject, and the subject-matter now selected to be taught, give geography high rank among educative materials for elementary-school purposes.

Geography no longer means mere location of natural features, cities, and boundaries. It no longer means an isolated study of the earth's physical features nor of man's distribution over the earth's surface. It divides itself into two main sciences, physiography and ontography, the latter subdividing, according to Tower,† into three divisions, the last of which includes industrial, commercial, and political geography. In all these the common element is *relationship*, with emphasis on the interrelationship of man and his material environment. How man adjusts himself to his surroundings, how he *utilizes* the forces of nature for his and his fellows' good, how in part through his response to this material world he attains highest self-realization—these make up the meaning of modern geography.

Methods of teaching have changed as much, if not so rapidly, as has the meaning of geography. No longer are capitals and their locations sung; no longer are tracing-lessons the main form of reciting; mere memoriter work from a text is a thing of the past. Teachers now propose to their pupils, or, still better, lead pupils to propose for themselves, "problems" or "projects" the working out of which demands all locative, physiographic, and statistical facts

* For generous help on this, as well as for valuable constructive criticism on the whole topic, the author is deeply indebted to Mr. George J. Miller, Secretary "National Council of Geography Teachers," and Professor of Geography, State Normal School, Mankato, Minn.

† Article in the *Bulletin of the American Geographical Society*, November, 1910.

needing to be known. By helping intermediate-grade children to reason from effect to cause, the teacher leads them to build up a body of geographic principles found to be permanently valuable in making life adjustments. In older grades, to test the pupils' understanding of these principles, as well as to give them practice in applying knowledge, the teacher suggests problems whose solutions demand, first, reasoning from cause to effect, and, second, careful checking of inferences by the securing of facts on the subject from reliable authorities.

The subject-matter of the elementary-school course can be briefly outlined as follows:

I. Man's material environment.

A. Inanimate.

1. Land.

a. Surface.

b. Soil.

c. Minerals.

2. Water, on and within the earth.

3. Atmosphere.

a. Temperature.

b. Movements.

c. Moisture.

(All more or less dependent on the earth's planetary relations.)

B. Animate.

1. Plant life.

2. Animal life.

(Both dependent on the inanimate environment and on each other until man intervened.)

[Result: *Physiography*.]

II. Man's adjustment to his material environment.

A. In securing the fundamentals of life: food, shelter, clothing.

1. In their natural forms.

2. In changed forms as man invents ways and means of overcoming obstacles or of utilizing those which cannot be conquered.

[Result: *Industrial geography*.]

B. In finding, on the earth's surface, the location suited to man's needs, ambitions, or temperament, and in forming governments to fit the various groups thus separated.

[Result: *Political geography*.]

C. In coöperating with fellow man no matter how inaccessible he may appear to be.

[Result: *Commercial Geography*.]

Each subdivision as a science is beyond elementary-school pupils, yet each contains much that they can comprehend and need to know for both immediate and future adjustment to their environment.

GRADES I, II, AND III.

When children begin going to school, thus regularly leaving and returning to their homes, *home* takes on a new meaning, and may, consequently, well be made the core of whatever geography-work is done in grades I, II, and III.

In grades I and II, geography is not differentiated from the other subdivisions of science, and is, therefore, not outlined in detail. Many geographic facts are incidentally acquired, even if they are not deliberately taught, in connection with nature-study, excursions, physical education, literature, and other daily experiences

both at home and in school. Since the teacher must avoid forcing upon pupils her own organization, only two problems are proposed, and these are meant to be merely *suggestive* of those geographic facts which will naturally be gathered by the end of the second grade.

Problem I.—How the family adjusts itself to diurnal changes.

1. Hours of rising.
 - a. In relation to daylight.
 - (1) Cause of returning day. A general answer, the rising sun—no scientific explanation attempted.
 - (a) Directions—known by the sun's rising in the *east*; by length and direction of shadows cast.
 - (2) Dawn.
 - b. In relation to a time-piece.
 - (1) The clock.
 - (2) Other ways of telling time.
 - (a) Shadows—length and direction.
 - (b) Hourglass.
 - (c) Sundial.
2. Preparation for the day (also related to industry and hygiene).
 - a. Father's preparations. b. Mother's. c. Children's.
3. The daily routine of adjustments—tasks, meals, school, father's business, etc. Special house-work for different week days. Why? (Related to thrift and to hygiene.)
4. Occasional variations in this routine—as for birthdays, holidays, guests, or, perhaps, illness in the family.
5. The end of the day.
 - a. Sunset, dusk, night.
 - b. Why earlier in valleys than on plains or hills?
 - c. Moon and stars for light—compare to sunlight—direction as known by north star through "Great dipper."
6. Preparation for the night.
 - a. The evening "chores" or "tasks."
 - b. The care of animals, if there are any about the home.
 - c. The care of buildings—doors shut; some locked because of wind or rainstorms, minks, foxes, etc.
 - d. The fire—covered or let die out—kindling and other material collected for quickly making new fire in the morning.
7. Hours of retiring, and why.
 - a. The need of sleep and rest (related to hygiene).
 - b. Children's hours.
 - c. Parents' hours.
 - d. Variations on occasion.

Problem II.—How the family adjusts itself to seasonal changes.

1. In relation to food.
 - a. Selection of in different seasons. (Expand as desired.)
 - b. Original sources of—planting, cultivating, harvesting; hunting, fishing.
 - c. Preserving and storing foods—home methods; factory methods, if some food-plant can be conveniently visited.
 - d. Stores—buying and selling food: from near-by regions; from foreign lands.
2. In relation to clothing.
 - a. To fit changing seasons and weathers—heat, cold, rain, snow, hail, wind. (Such study of each as children seem to want—not any finished study of these elements.)
 - b. Recognition of different materials—cotton (and perhaps linen), wool, silk, rubberized goods, leather, and fur.
 - c. What the family does in making clothing (related to home industry).
 - d. In cleansing clothing (related to hygiene).
 - e. Need of warmer bedding (that is, night clothing) in winter.

3. In relation to shelter and home comforts.
 - a. Changes in living with different seasons—from tents to warm houses, or from much porch living to indoor living as winter approaches. Relative value of different materials for house-building to suit different climates (or seasons, or even weathers)—log, lumber, brick, stone, stucco, etc.
 - b. How the home is planned to meet family needs—living-room, dining-room, kitchen, sleeping-rooms, cellar, and so on. (Children should be encouraged to make leaf-houses in the yard or to lay pegs or blocks on desks to outline floor plans of their own homes. This leads to map-work in third grade when pupils make plans or maps of the schoolroom and yard; of stores, excursions, and villages.)
 - c. Preparation of the house for winter—storm-doors and -windows, banked foundation, etc.
 - d. Heating apparatus put up or overhauled—fuel secured and prepared against stormy and cold weather.
 - e. Thermometer—weather-vane—their uses.
 - f. Sunshine—changing amount of in different seasons; weather records for each season kept.
 - g. Lights—kinds used in different families—care of.
4. In relation to daily work.
 - a. Any change in father's work? In mother's work? In children's work?
 - b. Effect on the family work of having the children in school.
 - c. The animal helpers and pets about the home: Do they require more or less care in certain seasons? Do they perform more or less service then?
5. In relation to play, sport, or recreation.
 - a. What father and mother play in different seasons. (Indoor games, outdoor games, reading, entertainments, picnics, etc.) (What children can do to help mother and father have a good time.)
 - b. What children play in different seasons—(1) Related to nature-study—collecting flowers, ferns, leaves, berries or seeds, nuts, sands, pebbles, cocoons, etc. (2) Related to physical education—marbles, kite-flying, running games, skating, sledding, swimming, etc. (3) Related to home life—toys, dolls, checkers, parchesi, guessing games, puzzles, reading, story-telling, holiday celebrations, etc.

NOTE: In grade III the differentiation of geography from related topics may or may not be made, as best suits local school needs. Although such segregation is here made, it is done to meet a need, strongly felt in rural schools, of uniting certain grades in geography and history, or of alternating the two subjects. A city school may give the work as here planned, or may postpone all third-grade geography until fourth grade, since what is outlined can easily be done in shorter time by children a year older. Rural schools may follow one or both of the following plans: (1) Alternate recitations by the day or week in geography and history, since the courses are kept fairly parallel throughout, or (2) take the work outlined in both history and geography for the odd-numbered grades in the odd-numbered school years, and the work outlined for the even-numbered grades in the even-numbered school years. (For example, third and fourth grades will together recite fourth-grade geography, in the school year beginning September, 1916. The year following, both classes will study the third-grade outlines; that is, the fourth grade of 1916 will, in 1917 take fifth-grade work, whereas the third grade of 1916, which becomes the fourth grade in 1917, having already done fourth-grade work, will, with the regular third grade of that year, take third-grade work.) Of course such alternation affects the method and the amount of work covered, since, when pupils of a lower grade must do the work of a higher before they have had their own class-work as a foundation, certain loose ends have to be gathered up, and the method of attack must be changed to suit class needs. This disadvantage is outweighed, in rural schools, by a saving of time; besides, since there will often be only five or six pupils in the combined two grades, the teacher can give them considerable individual attention. The plan in this Course of Study makes possible the combination of third grade with fourth, fifth with sixth, and seventh with eighth, in either geography alone, history alone, or both geography and history if necessary.

Grade III.—The geographical concepts to be gained by third-grade pupils, like those gained by first- and second-grade children, grow out of home and community problems, and must be tested by the principle which defines all geography—*man's response or adjustment to his environment*.

The two problems given under first- and second-grade work may now be expanded to include the larger family-life known as community life—the “four-corners” group of homes or stores, the village, or the city. Besides thinking

about what his own family does, the child now becomes interested in the lives of his companions' families, particularly if they differ from that of his own. What the uncles, big brothers, distant cousins, and others, do to make a living and to help others are problems whose answers all children love. Although the study of industries may closely correlate with this work, *when the geography attitude is desired*, processes must take *second rank*, and the problem of *how and why man adjusts himself to his environment* in this particular way must be kept to the fore.

Third-Grade Problems: According to the community using the course, selections from the following groups of problems will be differently made, or at any rate differently emphasized:

- A. What natural resources does the farmer utilize? How does he utilize them to support his family? How does each member of the family help? What must he buy from others? What has he to sell? How does he receive what he buys and deliver what he sells? What helpers (animal, especially) does the farmer employ? How does each help? What care must the farmer give each? After a typical farm has been visited, a map of the farm should be made, showing location and comparative sizes of the different fields; of pastures, wood, house portion, roads, kinds of fences, and whatever will later be of value to children in interpreting maps or in knowing about the farmer's methods of utilizing natural resources, or of transporting his excess products. A sand-table reproduction of the farm helps to clinch points learned and further to interpret the map made.
- B. What does the miller use in his environment to support his family? How does he serve others? A visit to the mill may bring out the problem of its location—why near water? Why in town? Why in our state? A map of the route traversed in the excursion, or of at least one floor of the mill, may continue interest in map-making and map-interpreting.
- C. The answer to the question, "What is done with the flour?" leads to a study of how the baker earns a livelihood and at the same time helps others. The need of cleanliness in baking and in delivering bread should be emphasized. A block map of the village may now be begun with the places visited marked in special ways.
- D. The stores: general, or, if the town is large, special,—such as a grocery, meat-market, milk-depot, dry-goods store, shoe-shop, harness-shop, and furniture store. After each visit, pupils may make maps of the store or factory, or even make miniature stores from pasteboard boxes. These stores may have the "goods" arranged as they were in stores visited or in ways thought to be better.

NOTE: Take, for example, the local market, general store, or grocery:* (1) What are the various articles which can be purchased here? (Vegetables, fruits, meats, fish, flower-seeds and bulbs, potted plants, etc.) (2) Make a list of all that came from surrounding territory; that came from distant lands. (3) How were the various products brought to the store? (Transportation; men necessary; care of produce in transit, etc.) (4) Care of produce at market to keep it wholesome (sanitary regulations). (5) Transporting the products to the children's homes—care.

Arithmetic drills may be motivated by such visits; while letters to ask permission to visit the merchant or worker, as well as letters of thanks after the children return, become a strong incentive to good language-work, penmanship, and spelling, so that the excursion may legitimately use more than mere geography time on the program.

- E. How the miner secures food, shelter, clothing, and pleasure, for himself and family; how hard he works; what risks he runs; what he does for the world; are problems of vital import to many children in Minn. (and other states).
- F. The builders—carpenters, masons, blacksmiths, tinmiths, plumbers—are next to be studied.
- G. The men who supply the builders with their materials,—that is, lumbermen, sawyers, quarrymen, brickmakers, and manufacturers,—form a new group to be studied, each with problems to be expanded, if they are close to the children's lives.
- H. What doctors, ministers, and teachers, do for the community as they earn their life necessities.
- I. Transportation companies and their agents, who aid all the workers to secure or to dispose of their products; post-office employees; freight and express agents; bankers, who help men to save money and to pay distant bills; all these need to be recognized as valuable members of the community.

* From the Ohio Elementary Course of Study.

- J. The firemen, policemen, street or road commissioners, and such other members of the community as children have need of knowing, should be given due attention.
- K. Contrast the country, where various forms of farming are the means of living, with the town, where manufacturing and trading are the main forms of human response. A typical town or city should be visited, if possible, so that pupils may know at first hand the various activities. Compare country roads with city streets; lighting and heating in the country with the same problem in the city; the bountiful garden on the farm with the tiny or no garden in the city; the kinds of animal helpers and pets to be had in both places, with the care of the same.

If the school is located within excursion distance of two towns or cities, one may be visited and studied as indicated. Then, before visiting the second, the children can apply their new knowledge by interpreting a map of the second city, planning what to see there and how to see these things with the greatest economy of time, effort, and expense. Appointing guides or committees to engineer certain parts of the trip will motivate careful and intelligent map-study, selection of points of interest, and judgment in carrying out details.

GRADE IV.

(Read note preceding grade III, as well as discussion under grade III.)

Through solving the problem of how we secure the necessities and luxuries found in our homes and not produced in our locality, fourth-grade pupils are imaginatively led into distant lands. There they learn how different peoples respond to their various environments so as to secure food, shelter, and clothing for themselves and still produce the articles we desire; how they dress, play, and live daily; how and what they eat, as well as what they think, read, and say. Children thus get their first view of the world as a whole, learning of its shape; of the division of its surface into the various oceans and continents; and of the modes of communication, transportation, and travel, employed between us and these distant peoples. They recognize how dependent men are upon one another, and hence how truly men are "brothers."

The method of work should emphasize human activities, although children incidentally learn that these activities are conditioned largely by the climate, soil, and topography, of the regions studied. Although pupils must not be forced to generalize, nor permanently to organize the details which they are gathering, the *teacher* may be helped by the outline given below:

- A. The earth's shape and movements.
 1. The story of how men learned the truth about the earth's shape and motions.
 2. Effect of the earth's shape and of its movements in relation to the sun, upon—
 - a. Diurnal changes.
 - b. Seasonal changes.
 3. The temperature belts.
 - a. Hot belt.
 - (1) Location.
 - (2) Climatic features, temperature, winds, rainfall.
 - (3) Plant life of the zone.
 - (4) Animal life of the zone, and the interdependence of plant and animal life.

- (5) People of the zone, and their dependence on (2), (3), and (4).
- b. Warm belts. (Same five points as those above.)
- c. Cold belts. (Same five points again.)
- 4. Direction.
 - a. On the earth's surface.
 - b. On maps of the earth's surface.
- B. Land masses (or continents).
 - 1. Location of each.
 - 2. Relative size and importance to us.
 - 3. Main physical features of each. (A chance, if local conditions are suitable, to teach the more usual land and water forms.)
 - 4. Important human types found on each.
 - a. Where located on the continent.
 - b. How adjusting themselves to their surroundings. What they wear, eat, and have; how they work; what they produce; what they play and think; how they help us; what we do or can do for them; what landscapes they look upon; what flowers and animals they fear or love, or train for helpers; in brief, what *homes* in other lands are like.

NOTE: Since most of the foreign homes studied disclose more primitive ways of doing things than those employed in our local American communities, this study becomes especially valuable school subject-matter: (1) Children understand the simpler modes of life, even though they live in the midst of complexity. They revel in the constructive work suggested by making in miniature on the sand-table, or in the large in a corner of the room, the homes of the different race-types studied; or, if neither of these is possible, in doing just one or two of the things done by these "brothers" and "sisters" who live under different conditions—such as weaving a mat with Gemila, or making clay animals, a feather-duster, or a leather ball with Louise.* (2) To get dramatically the lives of people in other climes helps pupils to interpret better and to appreciate more their own complex lives. (3) If children live in a community where any of the descendants of the foreign types live, they can be led to understand and love these people, learning the lessons first hand from them, for a tactful teacher can get the consent of different citizens of foreign birth to let her take a class to their houses to hear stories of distant lands, and to see articles brought from abroad.

- 5. Type industries of other lands are learned in relation to community industries and community needs, but should not be studied intensively.
- 6. Transportation over land areas.
 - a. Across plains, over and through mountains, through passes, along rivers, across rivers, over deserts, through jungles, etc.
 - b. How accomplished—animal helpers such as camels, llamas, elephants, horses, and dogs; railroads, bridges, tunnels, canals, etc.
- 7. Means of communicating with distant peoples.

Messengers, carrier-pigeons, mail, newspapers, telegraph, telephone, and so on.
- C. Water expanses (or oceans).
 - 1. Location of each. 2. Relative size and importance to us.
 - 3. Plant and animal life therein, of value to map.
 - 4. Shore line—meeting of land and water masses.

Bays, gulfs, seas, straits, harbors, peninsulas, islands, capes, etc.

How formed. How made use of by man.
 - 5. Transportation over water.
 - a. Difficulties and dangers. b. Aided by currents, winds, etc.
 - c. Need of ships of different kinds.
 - 6. Communication across the oceans; how secured.

NOTE: In all of this study the teacher will find representative work invaluable as a means of clarifying, organizing, and clinching children's ideas. Construction work in several media, sand-table work, pictures and descriptions of regions, dramatization of improvised plays which give the home-life of the different peoples, lantern-slide entertainments, stereoscopic pictures, drawing, painting, and chart-making, are all valuable forms of representation. The drawing of maps, as well as the modeling of them in clay, paper pulp, flour, or cornstarch, helps pupils to crystallize their knowledge of forms and locations, and lays the foundation for later map-interpretation. The use of colored crayons and water-colors in map-work is especially pleasing to pupils. Of course maps of distant regions should not be drawn until pupils have learned what maps really represent, through the drawing of local maps (or plans) of the school-room, yard, a farm or industrial plant visited, or some village or region actually traversed. Because children enjoy globe and map drills on mere locations, care must be taken not to do too much of this. Plenty of opportunity for "place-geography" arises in grade after grade, as pupils study (1) world industries and the usual accompanying statistical maps, (2) history, (3) current events, (4) literature, and (5) general reading. If all these opportunities are utilized, pupils will not, at the end of the course, lack in locative knowledge.

* "Seven Little Sisters," and "Each and All."—Andrews.

As said before, this outline is merely a form of organization, and should not govern the order of treatment of topics. Perhaps, on a rainy fall day, the teacher drops other plans, and discusses the causes of rain and the fate of the drops—how some moisten the soil and aid plant-growth; how others sink into the earth to appear later as springs or wells; how some run off rapidly into creeks and rivers, eroding the soil, perhaps carrying a bit of local soil to the Gulf of Mexico; and how others are more or less quickly evaporated to moisten the air we breathe or to form mist, fog, or clouds. Such a series of lessons will last a number of days and will lead to weather observations and recordings of temperature, sunshine, clouds, and rain; to the noting of signs of seasonal changes as seen in changing temperature, behavior of plants and animals (especially trees and birds); and to observations of the sun's positions in the heavens.

What to expect by the end of the fourth grade.—1. That pupils may have the knowledge indicated by the outline given above, although this knowledge will not be so organized in their minds.

2. That they can name and locate on the map the continents and oceans, and take a map trip to any of the regions studied, naming the most important countries passed en route, stopping, perhaps, to tell of their surface and climate, products and people.

3. That they can say how far the home community is able to meet its own needs and what must be secured elsewhere, with a *general* knowledge of why the home region can or cannot meet all the community's needs, and why other localities are able to supply the lack.

4. A knowledge of the differences in living in rural and urban communities, with the larger advantages and disadvantages of each.

GRADE V.

The subject-matter of the year is North America, to be first studied as a whole, and then by sections, with considerable emphasis on Minnesota* when the central section of the United States is under study and whenever the problems of other portions relate closely to Minnesota.* This course so nearly parallels those outlined under industry and citizenship that constant cross relations are possible, and since arithmetic, literature, and composition work, may be motivated by the geography, history, and industry courses, the teacher should make the entire work of the grade one unit, letting each course help the others.

NOTE: This first work is not given with the primary intention of developing geographic principles, although many facts here learned will, later, be so used. See sixth-grade work for an outline of continent study connected with the development of principles. This year's work is meant to be just generally informational.

The "problem" or "project" method of teaching geography and history is just now replacing the earlier forms of lesson-plans. The advantages are numerous enough to make the plan worthy every teacher's trial, at least. (1) The selection of a problem by pupils, or to suit pupils' needs or interests, at once insures enthusiastic effort. (2) Such effort tends towards practical efficiency, since it

*For "Minnesota" substitute the name of any desired state.

is expended along lines which adult life demands: search for sources, judgment in the selection of material found, checking the reliability of information, and learning where and how to secure information in solving a problem. (3) The working out of a project unifies many otherwise unrelated yet valuable details and at the same time eliminates a host of inconsequential facts that might seem just as important as those chosen, were they all listed and abstractly evaluated. (4) This plan enables teacher and pupils to work side by side instead of in different planes; the result is greater sympathy with one another, and a broader-minded attitude.*

A number of teachers have already asked how they can use the State Course and the problem method of work with the text-books they must teach. This is less difficult than it appears. As Dr. McMurry says,† the geography curriculum should be independent of any particular text, and should be broader and better organized than is the work in any one text-book.‡ The main thing for the teacher to do is to set (or get the pupils to set) a good problem, work enthusiastically with the children over its solution, and then check in the text the amount of work there covered. By frequent checking the teacher notes what may be left to do and seeks problems whose solutions will cover the remaining facts to be learned. New problems will re-use much material once found and thus obviate in large measure the once-thought-necessary mechanical drills.

A number of more or less satisfactory problems are listed, with brief suggestions as to their scope; but, since teachers, pupils, text-books, and communities, are all factors in the final selection of specific problems, there has been no attempt to exhaust the field of work to be covered in grade five.

I. North America as a Whole.

- A. What do we need to know so that we may learn much about a country from just map study? (Answer reviews what is known of map-making and map-interpreting; adds the need of learning about latitude and longitude, the various methods of indicating topography on a flat map; the use of surface and altitude scales; and opens the problems of the year.)
- B. How have men learned to locate places on the earth's surface accurately? (Answered by the study of latitude and longitude. See pages 271-276.)
- C. What relation does the drainage of North America bear to the drainage of Minnesota (or reverse the question)? (Answer found in a lesson-plan, page 278.)
- D. Be "land agents" in Canada. What inducements can you offer settlers to make their homes in your region? (An excellent review of Canada's physiographical conditions, resources, and people.)
- E. Why does Canada not desire union with the United States?
- F. Does the United States care to annex Mexico? Why?

* A helpful article by George D. von Hofe, Jr., may be found in the May, 1916, *Teachers College Record*. † In the September, 1915, *Teachers College Record*.

‡ In "The World as a Whole," and "North America," Prof. Ridgley has shown how closely several texts agree in both the amount and selection of subject-matter.

II. The United States.

- A. What does it commonly mean to be "an American"? Why has "An American" come to mean "A citizen of the United States"? (Answer leads to a comparison of the United States with other divisions of North America, in the matter of extent of territory, population, latitude and longitude, natural resources, industries, commerce, ideals, rank among world powers, amount of influence, opportunity, and so on. The solution should lead to proper civic pride, with its accompanying obligation to make strangers welcome and happy here.)
- B. How has the purchase of Alaska benefited the United States?
- C. Why is the East more thickly populated than the West? (Both a geographical and a historical question.)
- D. Why is the steel industry centered around Pittsburgh? Account for the recent westward movement of the industry. (Gary and Duluth, for example.)
- E. How is the outlying territory of the United States made to feel itself a part of the home country?
- F. Prove that it benefits the United States government to expend money: (1) On the reclamation of arid lands in the western states (see pages 276-278 for one answer). (2) On forest conservation. (3) On a fish and game commission. (4) On keeping the Mississippi river dredged.
- G. What is the government's duty to the Indians? (Answer leads to a study of how the natives of North America adjusted themselves to their environment; how, when robbed of their accustomed means of support, sometimes cheated and injured, they lost power and heart, and, like little children, had to be cared for and taught new ways of making adjustments to their changed environment. The study gives a background for the appreciation of all primitive life, and an impetus towards broad self-training that permits ready adaptability to new situations. The study may be expanded to include the specific study of Minnesota Indians, and their relation to early pioneer life in Minnesota, the Sioux massacre, and so on, but should not be forced beyond the abilities of the pupils. The problem leads to a study of United States Indian reservations, where located, what done on them, Indian schools, cost to the government, and so on. Is the government meeting its obligations satisfactorily or not?)
- H. How do we pay for the necessities and luxuries which we import? (The answer involves a study of exports in relation to imports.)
- I. Why do people "go West"?
- J. (1) What would you see people doing if you should go by rail or auto from our home town to Buffalo? (2) To New Orleans? (3) To San Francisco? Suppose you go by train or boat and keep a note-book during the entire trip; suppose you plan the return trip so that you pass in daylight the places passed in the night on your outward journey: I should like to see or hear pages from your note-book, a week from today. (4) Keep a diary of what interests you day by day in a week's visit on a cattle ranch. Or (5) Keep notes on a week spent in the Twin Cities and vicinity.
- K. (1) Let us show on our sand-table how people raise such fine fruit in eastern Washington. (An irrigated farm constructed.) (2) Or, let us build a coal city, showing the town above ground and the miners below. (Demands much reference reading to make the completed table consistent.)*
- L. Find the cause of the growth of ———— (Supply the name of some section of the United States, of some state, of some great industry such as iron-ore mining in Minnesota, of some city, such as New York, Chicago, or Minneapolis, or even of some section of the local state under study.)

III. Minnesota. (Change to fit any state under study).

- A. (1) Why is Minnesota often called "The Bread-Basket of the World"? Prove her right to the title. (2) Why is Minnesota occasionally called "The Butter Tub," too? Prove that she may properly claim

* Such a table was prepared with great success by Miss Edna Merriam, of Minneapolis.

- this name. (Answer *may* include surface and soil formation, glacial action, etc., as well as industries.)
- B. Why do people from foreign lands (especially European countries) seek Minnesota? (Answer involves: (1) A study of immigration, with the peoples' sacrifices made in leaving the father-land; the dangers met in coming to America; the difficulties of entrance at Ellis Island; the hardships met in Minnesota. (2) A study of what Minnesota has to offer persons possessed of certain characteristics and of certain ambitions: mining for the Fins, Russians, Austrians, and Bohemians; railroad labor for the Italians; various forms of agriculture and manufacturing for the Scandinavians and Germans; and so on.* (3) A study of what schools can do and what fifth-grade pupils can do in their own community to help make these people feel at home, love Minnesota, and become loyal American citizens.† (4) A recognition of the worth of certain foreign-born men and women of fine character, ability, and loyalty, sure to be found in every locality.)
- C. What effect have the Great Lakes upon Minnesota's industrial development? (Answer will include the problem of water *versus* rail transportation.)
- E. How do great steamers get past the falls of Sault Saint Marie? (Canal lock-system studied.)

What to expect by the end of the fifth grade.—(1) That pupils will have learned the several ways of acquiring geographical knowledge, namely: (a) By the observation of geographical phenomena; "especially that pupils shall by this time have learned to tell true directions by the sun, moon, and stars; to get 'their bearings' and feel them true, under a fairly open sky, at any hour of day or night."‡ (b) By map study. (c) By ability to gather knowledge from the teacher or a speaker who gives direct oral instruction. (d) By the intelligent use of text-books and a few reference-books. (e) By making sensible inferences from facts already known.§

(2) That pupils will know the essential facts about North America, the United States, and their own state, which will later help them in reasoning causally and in living more richly.

(3) That throughout the year, as children solve problems, or prove positions to others, rapid map sketching on blackboard, or occasionally more careful map drawing on paper, should be encouraged. Pupils should readily sketch North America, the United States, and characteristic sections, locating a few rivers, mountain systems, large lakes, and important cities on these maps.

GRADE VI.

The sixth year is to be spent on the study of South America and Europe, the two grand divisions most closely related to us.

During this year, the observations made in preceding grades *without any attempt at scientific explanations* are now recalled and

* Excellent reference material can be secured from the Minnesota State Board of Immigration, St. Paul. See especially "Minnesota by Counties." Also secure from the Minnesota Department of Education, Bulletin No. 60, called "Minnesota Day."

† The lives of several famous Minnesotans, Antin's "The Promised Land," and Wilson's Speech to Immigrants at Philadelphia, (see p. 62,) are good sources for material.

‡ R. J. Scarborough, Winona Normal School.

§ Taken, in substance, from the Wisconsin Manual of 1906.

used by the children in their formulation of the larger geographic principles which they discover (and are helped to organize) as they seek the causes for conditions found in the two continents studied.

South America is called by some geographers "the perfect continent" because, in formation of its contour, in its surface features, as well as in its plant, animal, and human responses to physiography, the great geographic principles are exemplified with few or no exceptions. It should be compared with North America at every step indicated in the following outline; pupils thus get a physiographic knowledge of North America to supplement the general information gained in Grade V.

1. General shape—proportion of the sides of the triangle.
2. Contour—number and location of coast indentations.
3. Latitude and longitude.
4. Ocean currents.
5. Surface—location and extent of plains, plateaus, and mountain systems, together with the direction and place of greatest altitude of the last.
6. Drainage—location and volume of the great drainage systems.
7. Temperature belts.
8. Winds.
9. Rainfall.
10. Plant life.
11. Animal life.
12. Other natural resources.
13. Human life.
 - a. Previous to about 1500.
 - b. Changes because of the discovery, exploration, and use of the continent by Europeans.
 - c. Modern changes since Europeans and Americans have made real homes there—especially in the temperate-belt countries.*

It is highly probable that not all facts desired can be secured through the solution of "problems," but the small residue left after the teacher has checked what have been so conquered can be quickly "rounded up." The following quotation from an article by L. W. Mayberry† gives some indication of the relative efficiency of thought methods and mechanical methods:

"In October, 1914, the pupils of the 6-A class were studying South America. The superintendent and one of the sixth-grade teachers tried a rather new plan in teaching geography to one of these sixth grades.

"It was agreed that little attention should be given to mere fact-questions as such. The emphasis each day was to be placed on thought-provoking questions. No more than three such questions should be assigned for study on any day. The pupils were given such questions twenty-four hours before they attempted to discuss them. They were expected to look up any facts bearing on the questions. During the recitation the pupils were encouraged to criticize a recitation by asking the pupil who recited some question that would show the weakness of the position that he took. No pupil was permitted to supply the information necessary for a complete recitation. Occasionally a question was laid aside for further study.

"This kind of work continued for about twelve weeks. After the continent of South America was completed by all of the sixth grades, the superintendent formulated a test consisting of three fact-questions and three thought questions, as follows:

* See *The National Geographic Magazine*, January, 1916, "How the World Is Fed," for a suggestion here.

† In *The Elementary School Journal*, March, 1916.

1. Name five countries in South America.
2. What oceans touch South America?
3. In what zones does South America lie?
4. What country of South America has been most progressive? What are the reasons for its progress?
5. What reasons can you give as to why the Guianas do not rank among the most important countries of South America?
6. Why is there such a variety of climate and products in the tropical Andean countries?

"This test was given to the class in which the experimental work was done, and to two other sixth grades. The papers written were all graded by a teacher who knew nothing about the experiment. The standing of each room is shown in Figs. 8 and 9 [not reproduced here].

"Room III is the room in which the experimental work was done. It will be noticed that none of the pupils in this room received grades below 70, while 75 per cent of them received grades above 90.

"We were interested to learn whether the pupils in Room III, where the thought-provoking questions were emphasized, had neglected the facts on which all reasoning must be based. As each question received a separate grade on each pupil's paper, it was easy to determine their success along this line. Correct answers to the first three questions required that certain facts be held in mind. The pupils in Room III averaged 96 per cent on these fact-questions and 85 per cent on the last three or thought-questions. The pupils in Room I averaged 83 on the fact-questions and 60 on the thought-questions. The pupils in Room II averaged 83 on the fact-questions and 70 on the thought-questions.

"No one would contend that such an experiment proves anything conclusively. Doubtless all will agree that these results are food for thought. Pupils may by one process or another accumulate a large number of facts; but if they have not learned how to organize or use such facts, they have gained little of value. On the other hand, if pupils learn to reason from day to day, they are compelled to use facts in order to draw logical conclusions. Pupils will become interested in geography when they see things in their proper relation, when the subject-matter is presented in the form of problems for solution."

A few suggestive problems to use with South America:

A. How can you account for:

- (1) Two rainy seasons on the broad plains north of the Amazon? (2) Heavy rains over all of Brazil? (3) No rains west of the Andes in the same latitudes? (4) Lack of forests in the valley of the Orinoco? (5) The desert of Atacama? (6) The presence of nitrates in Chile?

B. (1) Build South America on the sand-table. If possible, use a hose with a very fine spray nozzle and very low water pressure to illustrate the effects of rainfall on drainage systems. If a hose can't be used, a fruit-spray may be borrowed, or a watering-can may be used. Later, lay blue strings for rivers and place toothpicks to indicate cities and resources.

- (2) Product maps made in dozens of ways which teachers already know prove a good problem for any intermediate grade.

. A large rectangle of cork-matting or linoleum, on which a printed map is affixed, or on which an outline map has been drawn, proves especially valuable, since pins and tacks can be used without injury, thus permitting pupils to use such a map in class drill-exercises.

- (3) Modeling of relief maps in clay, starch, or paper pulp, or chalk modeling on the blackboard, may be used as a testing problem.

- (4) Make a floor or yard map large enough to be *walked* over.

C. What does South America furnish us: (1) To eat? (2) To wear? (3) For use in or about our homes?

D. What do we furnish South Americans in exchange?

E. Take a trip with a bag of coffee (or any selected product) from its source to our home town. (1) What change in clothes would be needed for the journey? (2) What animals would be seen? (3) What scenery viewed? (4) What part of the journey would be most interesting? Why? Most tiresome? Why? Most dangerous? And so on.

Dr. Charles McMurry once said, "Well-selected facts are indispensable to growth, but *mere* multiplication of facts creates stupidity." The "problem" is one of the best means of selecting worth-

while facts, and of eliminating many poor facts. The problems chosen would, in the main, lead to a search for fundamental causes of contour, physiography, and general life adjustments to conditions, with especial emphasis on man's response to his environment. However, in this grade as well as later the solution of a superior problem should be interrupted if some current, important, geographic fact needs noting, such as a disastrous volcanic eruption like that at Messina; final results in boundaries, or in economic conditions to occur at the end of the present "Great War"; famine; floods; a new canal (such as is suggested as possible from Duluth to the Mississippi); the actual attainment of the North or of the South Pole; a great snow storm which seriously ties up traffic; or the discovery and practical use of some new food-stuff. Current events are as vital in geography as in history.

Europe.—The influence of European conditions upon every phase of North American life makes the study of Europe both a necessity and a delight, not only to children, but to adults as well.

How the people of each country live, support themselves on such small areas, supply the demands of other countries, conserve their resources; how they dress, talk, and play; what sorts of homes they have; the animal helpers they employ; their attitude towards education, art, music, and science; all are problems of great interest. Discovering how all these adjustments grew out of "natural conditions" keeps geographic principles to the fore. Why any Europeans leave (or left) their native lands to make for themselves new homes in America; which nationalities came in greatest numbers during any chosen decade, and why; noting to which parts of North America the different nationalities came, and why: these are problems to be studied both in history and geography.

The influence of Europe on the plant and animal life of the United States is a very big problem to face—the importation of bees; birds; fruits; grain seeds, and with these some weeds; breeds of sheep, cows, and draught horses; of the silk-worm; and so on. The influence of European history on the amount of wheat, meat, cotton, and other products, which we export; the manufacture of firearms, as well as changes in the manufacture and export of farm and factory machinery for use in Europe: these are topics from which specific and vital "problems" can be made. To find what Americans can learn of thrift or economy, of recreation, of taste or style in dress, of science and art, from each of several European countries, helps us to grow broad-minded. The effect of Europe's call for our products upon the cost of our living shows us again and clearly the interdependence of nations.

Some interesting personal problems can be started by getting the pupils of one grade to trace their ancestry to its European origin; to summarize the results, noting the agencies which contribute to true Americanism, getting pupils to show what fine traits of character each nationality possesses and hence sent, in some measure, in their representatives, to America; the doctrine of *noblesse oblige* should be encouraged to the full, for each nation's descendants have something of which to be proud although nothing of which to "brag." If the school is in a locality of many foreigners, old-country garments, dishes, tools, pictures, legends, may all be collected and the life of those lands made very real. This also gives every child a chance to contribute something to the group. The same sort of effort may be expended in tracing the children's industrial ancestry, finding perhaps the cause of parents' present occupations in "America, the land of promise."

The power of true study, begun in lower grades, receives, besides much practice, definite onward impetus in the sixth grade, for, through their growing ability to pick out essentials and to organize facts around a core, sixth-grade pupils acquire a feeling of power that makes for renewed effort.

The teacher should take great pains to see that home assignments are not deadening to the aroused love of searching for and selecting of the most valuable facts. Seldom, if ever, should the assignment be mere written reproductions of information given at school. Parents and neighbors may wisely be enlisted in the problem-solving; school and community can be united. Supplementing of thought by reference reading, by the asking of questions, by atlas study, and other means, must be constantly encouraged.

Do a large amount of map *sketching*, of grand divisions; of sections (such as Italy and Scandinavia); of certain parts of cities (London, Paris, or Rome, for example); or of routes to be taken in imaginary travels through some of these lands. A relatively small amount of *accurate map-drawing* should be demanded. (Bought or hectographed outline maps should be used where such maps are needed.)

What to expect by the end of the sixth grade.—(1) The teacher should make sure that pupils have a few large geographic principles well in mind, having obtained them by reasoning from effects to causes, namely: (a) The general effect of the earth's shape, movements, inclination of axis, relation to the sun and surrounding atmosphere, upon air and ocean currents, as well as upon seasons, and upon location of temperature belts. (b) The effect of winds and altitude on rainfall. (c) The effect of rainfall on surface of the land, on soil

erosion and deposition, and on the great water-highways. (d) The consequence of all these influences at work, as seen in plant and animal life, including such forms of disease as have influenced man's selection or rejection of residence locations on the earth. (e) How all this environment has caused man to develop intellectually and to wrest a living from some regions while from others he could secure the necessities of life without effort. (f) How his needs have caused the development of industries, the interchange of products, and hence of ideas and customs.

(2) On the fact side, pupils should know South America and Europe at least as well as the Report of the Committee on Elimination, in bulletin number 51, suggests. Other facts are bound to be known if the problem method is employed.

GRADE VII.

The principles worked out in sixth grade need now to be tested by application to new and less known areas; namely, Asia, Africa, and Australia. The reasoning should be mainly from cause to effect, with a growing feeling that personal inference must be checked by consultation of the best authorities to be found—not one text alone, but many; not one encyclopædia, but as many reference-books as are available in school, in town, and in individual libraries.

Although it is assumed that pupils come to this grade with certain principles in mind, it is not expected that they will be proficient in the application of them. There must, therefore, with each new area studied, be opportunity to fix, for example, the facts of heat, wind, and rainfall, with their causes and variations—not as an isolated study, but with a special application to the portion of the earth then under consideration.

Team work has not yet become common, but every child feels the influence of his group and is desirous of contributing something worth while to class problems. The work of the year must consequently result in wide ranging among magazines and other periodicals, books of travel, of reference, and of information; the teacher has to be "up to date," and should take pains to see that pupils have access to the best-known sources of information and suggestion.

Of course every seventh-grade pupil has a certain amount of general information about the new regions to be studied, but such knowledge is not usually accurate or detailed enough to spoil the general plan of (1) noting causes, (2) inferring consequences, (3) consulting authorities for verification, and (4) recording the facts and verified inferences made, with the general reasons for such conclusions.

After the teacher has proposed a problem or two and knows that the pupils have their geographic principles fairly well in mind, pupils may be given copies of physical maps of the new land area to be studied,—Africa, for example,—with these commands as a challenge: Find out all you can about Africa from this map. Make written note of the things you find, if they are more than you think you can remember until recitation time. If the list is long, group the things you discover under a few large heads. Should the class need to have the problem subdivided the teacher may say: Find what you can about the climate of Africa from a study of the map alone. Then, what can you find out about the products? And so on.

The recitation period must be spent in noting what the pupils have been able to gather, unaided, from the map. If they have discovered most of the facts necessary for later use, the teacher may ask them to suggest things about which they would like to find out more; to tell where they may be able to learn those things; and then to set a problem or two for study by the children. If they have not organized the facts learned from the map, the teacher may guide in their doing this. If they need to review (or first learn) some points about map interpretation,—such as latitude, longitude, scale of distances, scale of shadings or colors for altitude, direction of winds, and so on,—the teacher must lead pupils to see that this lack of ability is a class problem to be solved before other things can be done. Questions of this nature will need to be asked: If you know the latitude of the north and south boundaries of a country, what can you infer? What influences *may* change your inference? (Altitude, winds, ocean currents, for example.) So far as you can tell from the map, are these influences at work? Where are the regions of greatest and least rainfall? How are you able to infer this? Where will you expect the densest population? Why? What will the people probably do there for a living? How can you predict that? After the teacher has suggested whatever problems seem needed, the children may be assigned one group-conclusion of large scope, or several individual inferences of narrower range, to be verified for the morrow.

As the work progresses, constant comparisons will need to be made between new and old facts, so that all necessary reviews of principles as well as of locations may be kept up. Again relatively little time should be spent on the drawing of detailed, accurate maps, but a large amount of rapid *sketching* should be encouraged. Hectographed or printed outline maps should be used for filling in of products, cities, surface features, transportation routes, or any details of which visualization is desired.

In the work on Asia, the three countries of Japan, China, and India, should be intensively studied; first, because they are typical nationalities; second, because they emphasize, on account of their location in different heat belts, the influence of physical conditions upon the national life of a people.

The "problems" may be similar to those suggested for earlier grades except that the majority of them should demand thinking from cause to effect. Only a few are appended:

- A. What rank among great nations would you expect [Japan] to have in manufacturing? In Agriculture? In Commerce? In Education?
- B. How could [Russia] make better use of her natural resources for national development?
- C. What nation's ships will predominate in [India's] harbors? Why?
- D. What industrial changes may we expect in [China] in the next decade? Why?
- E. What do you predict for the future of Australia? Why?
- F. What possibility is there of the South African natives becoming a leading people?
- G. Why is the Atlantic the great ocean thoroughfare?
- H. Why has China been called backward when she possesses such ancient culture?
- I. What makes a difference in races? What has each to give the world of valuable human characteristics? Why cannot one "look down upon" another?
- J. Why has Africa been called "the dark continent"?
- K. Prove that grazing is the best industry that could be proposed for —.
- L. How can a nation subsist so largely on rice as do —?
- M. What characteristics of temperament develop from oriental rug-weaving? Living near the Taj Mahal? Living on the desert of Sahara? Hunting ivory in central Africa? Fishing for pearls off the coast of India? Etc.
- N. Study the deserts found between 23 degrees and 30 degrees north latitude and those found between the same degrees of south latitude as to number, location, area, causes.
- O. The following problem demands thinking both from cause to effect and from effect to cause. Take a trip around the world on the fortieth parallel of north latitude, noting, in relation to it: (1) The dense-population areas of the world; (2) the race types predominating in these populated areas; (3) the large cities; (4) the main sorts of industries seen; (5) the trade routes crossed; (6) the superior plant crops, or (7) mineral deposits; (8) variations in climate with causes for the same; (9) changes in time with changes in longitude, including "the international date line"; (10) vehicles of transportation employed throughout the journey; (11) storms met on the journey if made in September, in January, or in June; (12) foods eaten, and their preparation, with their relative food-values, throughout the trip.

(Individual pupils or groups of three or four may "work up" solutions to some of these subdivisions of the problem, if the class as a whole cannot do all of them.)

What to expect by the end of the seventh grade.—(1) That pupils will have acquired the simple facts of physical geography (see pp. 127, 131, 137, 140) necessary to enable them to reason from cause to consequence along geographic lines, and from consequence back to cause. (2) That pupils will have a fair knowledge of the world as a whole, with such appreciation of other nations' service to the world as to kill forever a provincialism which makes the "Chinese (or any other people) so funny." (*We* are just as "funny.") (3) Such locative geography as the "problems" have motivated.

GRADE VIII.

NOTE: This Course of Study plans for at least two-fifths or one-half of a year's work in commercial geography for the eighth grade. Instead of employing consecutive daily recitation periods for a few months it is suggested that throughout the year two days of each week be given to geography, two to history, and one to arithmetic, each helping the other, since all will be unified by the common idea of the interrelationship of men through commerce. The work outlined may easily be expanded into a full year's work in schools where the time can be accorded it.

In common with the writers of many excellent text- and method-books on geography, teachers are beginning to feel the need of again extending geography into the eighth grade, from which it was, in many schools, displaced a few years ago when the subject-matter was mainly locative geography, and the methods mainly memoriter. The reasoning demanded by present-day subject-matter and methods needs maturer minds, and hence geography again finds a place in eighth grade and high school.

The work of the grade will naturally emphasize the United States and home state, since comparisons, constantly made with their conditions, lay a desirable basis for loyalty and patriotism and assist children to plan their own future as they recognise phases of the world's work yet to be done—done by those who love the land and fully recognize its industrial, economic, and social outlook.

If the work outlined for the preceding grades has been well done, pupils have a good foundation for the proposed new view of the field.

Of necessity, the study of the elementary principles of trade and commerce demands, and hence happily reviews, the pupils' general knowledge of: (1) All important points commonly placed in locative or political geography; (2) all principles learned about topography, temperature, winds, rainfall, tides, ocean currents, and planetary relations—such facts as were named under physiography; (3) the world's demands, and the distribution of areas producing the articles to satisfy these demands—that is, industrial geography.

The method of approach should be so different from methods before used as to make the subject (1) not only seem, but really be, new; (2) develop judgment of worths as use is made of facts needing to be clinched; (3) demand independence in study and thought; (4) produce a broader culture; and (5) open the pupils' eyes to opportunities for worth-while work in their coming adulthood. Several excellent books are available for use as texts, but the general plan of setting problems whose solution will demand the use of many books, as well as magazine-articles, original investigation, and thinking, is by all means the best. For reasons given above, the problems should oftenest lead to the consideration of home conditions: Why the United States leads in some industries and is behind in others; whether, for example, there is any section of the

United States capable of raising tea—a product confined to such a small area as to cause anxiety if that area were destroyed by earthquake or other natural forces.

Since the unifying thought of the eighth grade is vocational guidance, the geography studied should contribute its quota to the general scheme. This it can do if the teacher helps pupils to see:

(1) What men have done to utilize their environment; against what odds they have often had to work; how this strife has produced intelligence; how a too-easy life engenders indolence and stagnation and hence how one should not seek the easy job with short hours and big pay, nor the “white-collar jobs” in preference to the “overall jobs”; how spurs must be *earned* if the knight would take real pride in them. In connection with history, industry, vocational guidance, ethics, and composition, children should study the lives of men and women who have succeeded in various lines—in invention, in medical service, in private life, for example—so that there may be exploded all notion that big returns come by *luck* rather than by hard work.

(2) How, with this control of nature, has come an ever-increasing dependence of men on one another, and hence how the highest form of coöperation—division of labor—has arisen, until the best locations have been found for certain industries. Pupils must be helped to appreciate the accomplishments of others and hence the necessity of their being “both able and willing” to further the world’s work.

(3) How this specialization of labor has necessitated exchange of products; an increasing need of knowing the laws of supply and demand, and of producing goods that build up the producer’s reputation.

(4) What the industrial outlook is for the coming generation.

(5) How the exchange has widened from barter between individuals, to commerce in its most complex modern form with its need of men of broad vision, fine philanthropy, and great executive ability, to govern the great transportation systems, to utilize the changes in the world markets by being prepared to supply the new demands almost as soon as they appear, or to manage enormous banking and insurance undertakings.

Minnesota† will naturally be prominent in the last few months of the eighth year in connection with Minnesota history. Efforts to predict the future of Minnesota and of her separate sections or cities, with the consequent adjustments to be demanded of the next generation, must make for true patriotism.*

* United States Agricultural graphs; daily, weekly, and monthly, current periodicals which give such articles as those about “Men Who Earn \$100,000 Salaries,” or “How the World Is Fed,” or “The Brotherhood of Bread,” should be read. †Substitute any desired state.

What to expect of pupils by the end of the eighth grade.—"Given an unlettered map of the United States, on which the states are outlined, our grammar-school graduate ought to be able to write the names of the states in their proper places. He ought to be able to do as much for the important divisions of South America, Europe, Asia, and Africa.

"He should know the approximate location of the eight or ten best-known rivers of the Mississippi system; three or four of the Pacific rivers, and two or three of Canada; the three great river systems of South America, four or five of Africa, a half-dozen of Asia, two or three of the British Isles, of France, of Germany, and of Russia; also the Po and Danube. He should, of course, know the rivers of the region in which he lives.

"He should know the location of such arms of the ocean as are highways of the world's great commercial movements.

"He should know the location of those islands and groups of islands that are real factors in the world's activities, or have a great historical interest.

"He should know the facts of position, direction of trend, etc., of the half-dozen most important mountain systems or mountain groups of North America; the Andes, Apennines, Pyrenees, Caucasus, Ural, Himalaya, and Altai; the location of a few of the most frequently mentioned peaks, such as Mt. Blanc and Mt. Everest.

"There are a few capes that are often mentioned, such as Horn and Good Hope, and their location is worth knowing.

"He ought to know something of the location of the *chief* colonies of Great Britain, France, Germany, Holland, and the United States.

"He ought to know something of the location of some twenty-five of the chief cities of the United States, what those cities stand for in our industrial and commercial life, and the advantages of their situation. There are twenty or thirty foreign cities whose location should be definitely known, and also something of what these cities stand for. In addition to these there are fifty or more other cities at home and abroad whose names ought to be familiar to the pupil. It is sufficient to know in what state or nation these are located."*

Pupils should know where to find information of a required kind; should be well acquainted with at least one newspaper, one magazine, and two geographies; and should be able to solve thought problems similar to the following:

* R. H. Whitbeck: *Journal of Geography*, Vol. 4, 1905, pp. 149-154, quoted by George J. Miller, *Journal of Geography*, January, 1915.

SUGGESTED PROBLEMS.

NOTE: The problems may be of larger scope than those used in lower grades, but should, in each case, be narrow enough to suit the pupils' abilities, the time to be devoted to the subject, and the available sources for solution of the problems. Those suggested are not mutually exclusive, nor do they cover the entire field; the questions as well as the implied organizations of answers are merely illustrative and not meant to be followed as given.

- A. In what ways has man caused the entire world to contribute to his needs? [May be expanded into three large problems, each of which may again be expanded: (1) Man's needs (physical, social, spiritual). (2) Sources of supply and production of materials to meet these needs (natural; changed by man's inventions). (3) Distribution and exchange of these products (industrial, and art centers; transportation routes—land routes, inland water-ways, ocean transportation).]*
- B. What place in the development of North America do steam and electricity take? (Or, narrowed, Show the value of railroads to the development of the United States. Or, to Minnesota.)
- C. Show how the Appalachian highlands have affected trade.
- D. What has been the value of water to man in his progress? (The body's need, the soil's need, and trade's need of water.)
- E. What influences operated in the economic development of —? (Any area desired.)
- F. Account for the growth of the "Twin Cities." Predict their future. (Or, Duluth, or other Minnesota cities.)
- G. How does Minnesota rank among all of the states in the United States? (Solution should lead to comparisons of Minnesota with other states in size, population, wealth, educational ideals, industrial progress, social service, and a final judgment on whether she is living up to her ability.)
- H. The value to commerce of the invention of the mariner's compass. (Magnetism and gravity reviewed.)
- I. The value to commerce of the facts of the earth's shape and rotation. (Compare the circulation of air on a stationary earth with the wind movements on a rotating earth.)
- J. What effect on commerce does or will the Panama Canal have? The proposed canal from Duluth to the Mississippi?
- K. What has caused New York (or, any large city desired, with consistent questions) to outstrip other Atlantic seaports as a commercial center?
- L. What is expected as a result of China's "Open Door"?
- M. How has the crusade against disease and in favor of city sanitation affected industry and commerce? (May be subdivided into the problems met in special localities—Cuba, or the Panama Canal zone, or large cities' sewerage problems, for example.)
- N. What strides have been made in national economy during the last decade? (Illustrations: By-products from various manufactories used how; scientists' efforts to neutralize the bitterness of horse-chestnuts so they can be used as a food; reburning smoke; cottonseed-oil as a substitute for olive-oil; banana versus wheat flour.)
- O. Effect of "The Great War" on present and on future industry and commerce.
- P. Comparison of the cost of living in this decade with cost in other decades.
- Q. Why do the great railroads of North America have their main lines running east and west?
- R. Ten wheat problems of interest: (1) Value and use of wheat as a grain food. (2) Wheat farming in the Red River Valley or in Argentina. (3) Effect of these big farms on England's wheat culture; on manufacturing. (4) Other wheat areas of the world compared with these. (5) Varieties of wheat, its power of adaptation, history of its use in past centuries. (6) Dates of wheat harvest throughout the world, with causes. (7) Comparison of statistics about yield per acre, value per bushel, and so on, in a different countries or in different decades in our own land; causes; effect on commerce. (8) Transportation of raw wheat and of wheat products—where, when, how, cost, etc. (9) Cities that owe their preëminence to wheat—as distributing centers, manufacturing centers, and so on. (10) Machinery and processes employed in manufacturing wheat products.

* An excellent expansion of these topics appears in the Fourth Year-Book (1909) of the Superintendents' and Principals' Association of Northern Illinois.

- S. Note that in recent years the United States has sent several prominent citizens (Root, Roosevelt, Bryan, and others) to South America for the sake of establishing friendly relations between the regions. Why does the United States care for the friendship of South American countries? Why is manufacturing still relatively small in the South American countries?*

B.—NATURE-STUDY.

In common with all science, nature-study grew out of man's adjustment to his material world, and hence may use, as school subject-matter, whatever belongs to the natural environment of children in any given locality. Since modern transportation brings to the doors of our school boys and girls fruits, furs, minerals, and manufactured objects from every land, a nature-study teacher may legitimately claim the right to teach as environmental material not only Minnesota birds, trees, or weather, but also tropical fruits, nuts, and grains; the formation of diamonds, pearls, and amber; and the laws of physics according to which some odd, even if foreign-made, toy operates.

Since many of the same topics are open to treatment under the caption of geography or of industry, even though from a different point of view, the work in nature-study may either *supplement* or *complement* the work of other courses, depending upon the amount of time the teacher has at his disposal for all subject-matter. (See page 215.)

Nature-study may, first, open the eyes of the student to the *beauties* of the world: to the marvelous color combinations to be seen in grass, flowers, trees, clouds at sunset; in crystal lakes, or on snow-capped mountains; to the graceful shapes of all these objects as well as of curving paths, winding brooks, and jagged cliffs; and to the mysterious and wonderful adaptation of structure to function in either plant or animal life. If no more than this were done, nature-study could be justified as a worthy school subject—as one which aids man to higher development; but more than this is done.

The child acquires *definite information*, of specific value to him in a social way, in his reading, and later in his interpretation of life situations. He may learn a lesson of patience from every mother bird he watches as she warms the eggs within her nest; a lesson of industry from the same bird's feeding of her young; of cleanliness, from the way Nature sweeps her hillsides by the winds of spring; of beauty as he notes that every blot on the landscape is soon covered with a wealth of green; and, best of all, he learns, perhaps, to believe in Life Eternal as he sees the apparently dead seed, bulb, or cocoon, burst into fresh life. With Whittier, one wants to say—

* This last problem is adapted from the Ohio Elementary Course of Study.

Alas for him * * * *

Who hath not learned, in hours of faith,
The truth to flesh and sense unknown,
That Life is ever lord of Death,
And Love can never lose its own!

Thirdly, nature-study may, especially in intermediate and upper grades, be so taught as to give children a permanent control of the *scientific method* of attacking problems and of observing life; that is, with unbiased mind seeking the truth for truth's sake. From such study the highest principles of ethics can be acquired. Again, in the children's study of how plants and animals aid or destroy one another—the cause of and the extermination of weeds, of "smut," of "chinch-bugs," etc.—the reasons for gasoline-stove explosions; for building a fire in the best way; as well as in the study of a hundred other things, the tendency to observe and to look behind effects and to infer reasonable causes, builds up a sounder citizenship than could be built without this study.

On page 125 an attempt was made to draw some distinction between science and industry merely that the student of either could keep his bearings. For the same reason it may be well for the teacher to realize that while geography emphasizes the *utilization* of the material world, nature-study lays stress upon what may be *learned* from man's environment.

The original plan regarding this Course of Study was to make detailed suggestions for each grade in school; but when it was found that at least half the pages allotted to the whole Course would still be inadequate to give teachers all that they would wish along the lines of aims; of principles of selection of subject-matter, of methods of teaching different topics, and of sources of supply for their own equipment, the plan was altered. Many men have, each, devoted a score or more of years to the solution of just these problems, and have embodied the results of their labors in so many excellent texts on nature-study that every school library must already be supplied with at least one such book.* Besides many excellent texts, school journals contain much valuable material. Above all, Minnesota's teachers are fortunate enough to have a nature-study authority among their number, Mr. Gilbert H. Trafton, of Mankato, a man who, with Miss Reynolds's assistance, has prepared a course in nature-study for every sort of school in Minnesota.†

From whatever course the teacher selects material, certain topics, such as trees, spring flowers, birds, water as affected by

* See Minnesota School Library List, pp. 18-25, and, besides the older books, such as those by Jackman, Hodge, and Bailey, see "Practical Nature-Study and Elementary Agriculture," by Coulter and Patterson.

† Own Trafton's "Outlines of Nature-Study," published by the Comstock Publishing Co., Ithaca, New York; cost about 30 cents.

temperature, gravity, laws of levers, etc., must be spirally treated, (1) because the seasonal recurrence of some phenomena in nature causes recurrence of interest; (2) because old knowledge may thus be tested by use under slightly different conditions, and clarified, broadened, and clinched; and (3) because some pupils will not have been in a receptive mood when the topic was first given but will be psychologically ready for it at a second or third treatment.

Other topics have been found at all times to interest the majority of pupils of given ages and may therefore well be arranged for use in definite grades.

Illustrations—(not intended as an outline of subject-matter).—*First-grade* pupils are eager to watch things move or act—hence they like to study birds, chickens, rabbits, cats, dogs, etc.; watch a rapidly growing plant, or note the effect of the wind on smoke, on weather-vanes, etc.

Second-grade pupils add to this general interest in action a personal attitude and so want their *own* pets, flowers, discoveries, etc., discussed. Individual gardens are here a joy.

Third-grade pupils add imagination to the above, and enjoy personification of objects in nature, loving best those which can be played with or which have stories—pansy faces, sweet-pea bonnets, or Greek, Norse, and Indian interpretations of nature.

Fourth-grade children become somewhat more literal-minded and want *facts*, enjoy noting general relationships, as, for example, that gourds, canteloupes, pumpkins, watermelons, etc., belong to one family; that clouds, rain, snow, hail, frost, dew, and condensed water on the outside of a cold pitcher, are related; or that the domestic cat is worth studying as a representative of a large family of animals possessed of similar characteristics.

Fifth-grade children crave physical activity and revel in "hikes," excursions, explorations of caves, ravines, etc., and, during the winter months, thoroughly enjoy experimentation with simple physical apparatus, ending in the making of some toys based on principles of physics. Magnetism, cohesion, adhesion, and gravity, are some much-liked topics.

Sixth-grade pupils, beginning to organize their knowledge, even if crudely, like note-book work along several lines such as tracing certain manufactured articles from their source to their final use—tacks, different kinds of cloth, a breakfast-food, etc. Excursions and experimentations are still coveted and can be utilized in connection with the note-book work. Pupils of this age are also ready for some elementary science of a sort that creates wonder and admiration of nature's ways, such, for example, as a study of the parts of a flower, or of experiments in plant growth; of bees and their wonderful systematization of labor; and of laws of physics.

Seventh-grade children have been found to delight in the evolution of forms in nature—the dramatic background of present life—the adaptation of plants and animals to their environment, such as the gradual changes in the horse; in the cactus; how plants equip their seed-children to find new homes; the development of certain foods (oranges, tomatoes, apples) from the original species; etc.

Eighth-grade pupils, many of whom will soon leave school, take an interest in such things as will keep them alert to life about them *after leaving school*—in their vocations as bread-winners or as home-keepers. Hygiene and sanitation,

as related to the care of their own persons, rooms, food supply, protection from disease, labor conditions; laws of health and recreation; home gardening; use of the thermometer; heating, ventilating, lighting the home; laws of nature affecting various industries such as farming, manufacturing, commerce, etc.

Since, as has often been said before, the elementary school is not the place for the teaching of any subject *as a science*, nature-study must not be so taught. Nevertheless, such facts as are taught should be scientifically accurate, not needing to be un-learned later. For example, if third-grade pupils are making booklets containing pictures and descriptions of the "Plants We Use for Food," and have such chapter headings as "Roots that We Eat," "Stems that Make Good Food," "Edible Seeds," etc., they should *not* be permitted to classify potatoes under roots when it is just as easy to teach why the potato is a stem in third grade as it is in high school.

From the fourth grade up, the nature-study work *may* gradually approach real science, becoming what many call "elementary science," particularly since elementary work in physics and chemistry prepares both girls and boys very directly for better home-making.*

C.—PHYSICAL EDUCATION.†

Like the two preceding divisions of Science, physical education is closely related to industry, to vocational guidance, to civics, and to ethics, all of which courses should be read in connection with this one. To illustrate: the "safety-first" precautions necessary for all to learn, may, like sanitation in regard to food, be taught in this course, or in connection with industrial work; taught with civics in community effort for better protection of all; or in connection with the course in right living.

Like every other subject in the Course of Study, physical education has at least one characteristic which differentiates it from all related courses, so that a topic studied under this head has either a definite line of approach or a distinct method of treatment. The single word which seems to characterize physical education is "prevention," since all phases of the subject—physiology, hygiene, sanitation, gymnastic exercises, play, and safety first, are bent on the problem of how to prevent the material world (in the form of force, or disease, or ugliness) from defeating man in his attempts to adjust himself, for his own and his group's good, to his environment.

Man has learned that to prevent his being defeated by his material world, he must, at different times, exercise physical force, in-

* Gifford's text, referred to in the Minnesota School Library List, has proved very valuable for use by teachers of these grades.

† For excellent references on this subject see pp. 36 and 91 of the Minnesota School Library List, and p. 301 of this Manual. The best list to purchase is "Sources of Information on Play and Recreation," Bulletin No. 136, Russell Sage Foundation, New York City; 10 cents.

telligence, and character. The main thought in physical education can therefore not be the body alone. "The brain, more quickly and fully than any other part of the human organism, receives the advantage of better digestion, fuller breathing, and more energetic circulation of rich blood," and so must be considered in any course of physical education. Another important function of physical education is to develop the individual's power to execute plans in the face of seemingly insurmountable obstacles. That is, physical education must develop body, mind, and character. Hence it deserves a high place in every school's program of studies.

Before any school can make for itself a valuable curriculum in physical education, it must plan *time* for the subject; must see that there is a suitable place for *exercise*, in inclement as well as in fair weather; and must see that one or more *teachers* in the corps know the underlying principles of physical education and believe heartily enough in the work to do it intelligently and well. Then a course may be arranged which should take into account: (I) The various means of securing the desired results; (II) the gradation of exercises to fit the children's developing bodies, thought-power, and ideals; and (III) the adaptation of (I) and (II) to the equipment possible to secure.

Since space does not permit a full discussion of these three factors, an outline of them is given, accompanied by occasional parenthetical suggestions of elaboration:

I. Means of securing a sound body, mind, and character.

A. Health inspection of children—

1. To correct, where possible, physical defects.
2. To prevent the spread of contagious and infectious diseases.
3. To produce cleanliness and right habits of living.

B. Example—

1. Of the finest people in the community.
2. Of the teacher, who must be honorable, self-controlled, and physically sound.
3. Of other, especially older, children in the school.

C. Right habits in children themselves.

1. Play.

- a. For securing perfectly *free* body movements.
- b. For securing benefits to every part of the body—lungs, heart, digestive organs, muscles, brain, etc.
- c. For giving expression to children's emotions or ideas, as when second-grade children played Indian and composed a harvest dance.

NOTE: Through giving expression to his ideas and his emotions, the individual who profits by his experience soon learns at least three lessons: (1) To evaluate his own and others' ideas and emotions—*good judgment*; (2) to select the most desirable social forms of expression to fit worthy ideas and attitudes—*good manners*; and (3) to make habitual those forms of expression which held him to attain what he considers valuable ends—*poise, control*.

In childhood, these ends may be learning to walk, marching like a soldier, running in a race, or hitting a ball. The inexperienced teacher needs to be cautioned against overemphasizing formal exercises which to the child seem useless. Daily practice in working out a harvest dance with which to entertain another class will accomplish better results than will isolated drills including the same movements.

d. For pure fun and a cheerful outlook on life.

e. For motivating needed formative and corrective exercises.

2. Formative exercises through gymnastics or directed movements—
 - a. For correct breathing.
 - b. For correct sitting and standing.
 - c. For graceful movements, poise of body, clear eyes, straightforward attitude, pleasing countenance, etc.
(Not a complete list.)
 3. Corrective exercises (for the same objects if necessary).
 4. Games—
 - a. For teaching the lessons of—
 - (1) Coöperation. (2) Bearing defeat bravely.
 - (3) Submission to law (more restricted movements necessary than in play).
 - (4) Fair play.
 - (5) Generosity towards opponents who do good work.
 - (6) Loyalty. (7) Modesty over successes.
(And other lessons.)
 - b. For securing greater poise and grace in carriage—easy control of the body without self-consciousness—through—
 - (1) Singing games. (2) Rhythmic and folk dancing.
 - (3) Dramatizations.
 - c. For entertaining others, as in festivals.
 - (1) Parents. (2) Other grades.
 5. Sports—
 - a. To induce fearlessness, right daring, or courage, from which there results a feeling of power. (Swimming and riding, for example, teach this.)
 - b. To give opportunity for growth in initiative, in making rapid decisions, and then in promptly and energetically executing those decisions. (As in football.)
 - c. To encourage renewed effort in the face of defeat, self-imposed practice and patient effort, individual responsibility, and highest coöperation. (As in any competitive sport—hockey, baseball, football, etc.)
 6. Work done in school and at home.
 - a. For the development of—
 - (1) Persistence. (2) Reliability.
(See Ethics Course.)
 - b. As a means to apply lessons about posture, prolongation of effort, attention, etc.
- D. Precept—
1. Found in stories.
 - a. Historical.
 - b. Literary.
 - c. Like "Sure Pop."
 2. Found in a study of physiology, hygiene, sanitation, etc.—
 - a. Through a *well-chosen* text-book.
 - b. Through general-exercise talks suited to the child's understanding and needs.
 - c. By following some such outline as this:
 - A. Building up the body in general.
 1. Bones, or framework.
 - a. Function and composition of bones.
 - b. Food to eat for the health of bones.
 - c. Posture, sitting and standing, for the sake of the skeleton.

NOTE: To learn by experiment of what two main substances bone is composed, and which substance predominates at different ages in an individual's life, is the finest kind of basis for making the child conscious of his own posture, as well as thoughtful about giving room on the pavement, or in offering aid, to the stooped grandfather who, fearing the consequences of a fall, seems to "creep" along.

2. Muscles.
 - a. Function of muscles.
 - b. Food to build muscles.
 - c. The value of exercise.
3. The skin.
 - a. Function and general structure of.
 - b. Special forms of—teeth, hair, nails.
 - c. Effect on skin, or special forms of skin, of—
 - (1) Food.
 - (a) Kind. (b) Frequency of eating.
 - (c) Habits of chewing, etc.

- (2) Clothing.
 - (a) Material. (b) Tightness of.
 - (Not complete list.)
- (3) Bathing. (4) Sleep.
- (5) Housing—Ventilation, etc.
- B. Keeping well because of free circulation of good blood.
 - 1. Foods to make good blood. 2. Proper clothing. 3. Exercise.
 - (List to be extended if desired.)
- C. Preventing disease through keeping the respiratory system in proper condition.
 - 1. The nasal passages.
 - a. Need of keeping passages well cleansed.
 - b. Need of breathing through the nose.
 - 2. The throat.
 - a. The lodging-place of many disease germs—as diphtheria, typhoid.
 - b. Need of gargling, etc.
 - 3. The lungs.
 - a. Proper methods of breathing.
 - b. Outdoor air compared with indoor air.
 - c. Ventilation of rooms; how secured.
 - d. Prevention and cure of pulmonary diseases.
 - e. Cautions concerning the breathing of metal or other dusts in certain occupations.
- D. A sense of power acquired through proper attention to the digestive tract.
 - 1. The mouth. (See throat above.)
 - a. Care of teeth. b. Cleansing the mouth.
 - 2. The stomach.
 - a. Eating food that the stomach can dispose of.
 - (1) Kinds. (2) Cooking of. (3) To be chewed, how.
 - (4) Kept sanitary, how. Preventing dust, germs, flies, for example.
 - b. Eating seldom enough to give the stomach a chance to do its work—that is, not “munching.”
 - c. Need of pure water.
 - d. Diseases of the stomach—prevention and cure.
 - 3. The excretory organs.
 - a. Need of keeping them active. b. Kinds of food to eat to assist.
 - c. Prevention and cure of diseases of these organs.
- E. Need of keeping the nervous system in good condition.
 - 1. The special organs of sensation. (Take up each and show what care needs to be given it, since the loss of sight, hearing, etc., leaves one seriously handicapped for life.)
 - 2. Care of the nerves themselves; value of sleep, of play, etc.
 - 3. The brain.
 - a. Need of pure blood sufficiently supplied, hence—
 - (1) Avoid wrong foods and drinks. (2) Exercise judiciously.
 - b. Need of *thinking* to develop the brain's cells.
- F. “Safety first” an excellent habit to acquire.
 - 1. In regard to risking injury to whole body or to limbs, as in crossing tracks, etc.
 - 2. In regard to cuts, sprains, bruises, broken bones, rusty nails or rake-teeth, etc. Get the habit of turning down rakes, boards with nails in them, etc. Get the habit of handling tools carefully; of looking out for danger.
 - 3. By workmen in various occupations—“Safety-first” cautions to railroad-men; to carpenters; to men who work where sawdust, emery dust, glass splinters, etc., fly; to painters, etc.
 - 4. “Safety-first” rules about fires.
- G. Injuries and illness sometimes come in spite of precautions.
 - 1. First aid to the injured.
 - a. Simple antiseptics for cuts.
 - b. Bandaging for wounds and broken bones.
 - c. Stopping nose-bleed. d. Burns. e. Helps in nausea.
 - f. Helping headaches. g. Aiding one who faints.
 - h. Resuscitating one who seems to be drowned.
 - i. Recognizing symptoms of some contagious diseases.
 - (List not complete.)
 - 2. Care of the sick—
 - a. In fevers. b. In contagious diseases.
 - c. Invalid foods and their preparation. (See “cookery” for their serving.)
 - 3. Quarantine.
 - a. Benefit to ill person. b. Benefit to family.
 - c. Benefit to community.
- E. Enlarging the ideals of children.
 - 1. From mere obedience to the letter of the laws of health to regard for the spirit of those laws.
 - a. Not cleanliness for appearance only, but for ethical reasons.
 - b. Not clean front yards only.
 - 2. To apply to the city's—
 - a. Water supply. b. Sewage system. c. Food inspection; etc.
 - 3. In regard to precautionary measures.

- II. Graded exercises to fit children's growing needs should be chosen from the three classes of exercises which follow.

IN GENERAL FOR GRADES I, II, III.

- A. Exercises for quickness, habitual control or skill, and fair endurance.
1. "Sense-training" exercises.
 2. Walking, running, sliding, skipping, hopping, etc.
 3. Easy forms of tactics, calisthenics, apparatus and field work.
 4. Simple games of motion—running games like "blackman," "fox and geese," etc., for example.
 5. Rhythmic games and marches.
 6. Dramatization of labor activities.
 7. Some "safety-first" habits.

IN GENERAL FOR GRADES IV, V, VI.

- B. Exercises for strength and endurance.
1. Skill and quickness kept up by such exercises as skating, bicycling, swimming, rowing, riding, etc.
 2. Strength and endurance cultivated by competitive games of greater difficulty—pole-vaulting, disk-throwing, relay-racing, and the like.
 3. More difficult apparatus and calisthenic work, with proper breathing and correct carriage emphasized.
 4. More "safety-first" habits.
 5. Some ideas about first aid to the injured taught.

IN GENERAL FOR GRADES VII, VIII, AND BEYOND.

- C. Exercises requiring attention and alertness besides strength and endurance—somewhat differentiated for boys and girls.
1. Boys—Wrestling, boxing, fencing, baseball, football, etc. Exercises to develop manly courage and daring, concentration of attention, and the spirit of coöperation. Some gymnastics and apparatus work. Since, psychologically, boys are ready for strenuous effort before they are strong enough for it, teachers must see that physical exercise is not overdone.
 2. Girls—Gymnastics, light apparatus work, volley-ball, indoor baseball, basket-ball, folk and perhaps social dancing. Exercises to develop fairness, self-confidence, coöperation, and womanliness. Both sexes should have acquired habits of "safety first" and knowledge of simple first aids to the injured.
- III. Adaptation of means for securing results and of graded exercises to the conditions of a local school.
- A. Questions to ask:
1. Size of playground, if any.
 2. Size of and appliances in gymnasium, if any.
 3. Swimming opportunities.
 4. Number of teachers equipped to lead or to assist in the work.
 5. Coöperation of the community on each subject.
 6. Money that may be spent.
 7. Apparatus able to be made by pupils themselves.
 8. Means of ventilating schoolrooms if they *must* be used as gymnasiums.
 - a. Desks make fine apparatus.
 - b. But the air is vitiated by the dust raised.
 9. Text-books, if any are used, chosen with great wisdom.
 10. Time allowed for the work—whether taken from school-day or not.
- B. Choose from the courses in hygiene and in exercises what will fit the needs of each grade and the conditions of work. (See general suggestions on "Diagram" accompanying this book.)

IV.—INDUSTRY.

As was said on page 125 and shown in the outline on pages 203–205, the great bulk of industries developed as man tried to utilize or adjust himself to his material environment. Nevertheless, the present forms of these industries could not have developed except as man made adjustments to his social and to his immaterial worlds. Therefore it is that Industry becomes in the minds of many the golden link which binds together the three “worlds” in which man moves—those worlds which grow out of and end in unity, and are differentiated only that adjustments within them can be both better interpreted and better used as means of highest individual as well as group development.

With the evolution of modern family and group life, the period of human infancy has been steadily lengthening. This longer childhood permits an individual to postpone to a later and ever later date in his life his final choice of a vocation. When the existing typical industries with all their modern complexities are studied, the wisdom of delayed complete adjustment is evident; but that youth should (in a relatively care-free way) prepare for such adult adjustment is recognized by all. Through play, curiosity, imitation, emulation, or imagination, and some *required duties*, children should become acquainted with the larger principles of industry long before their feet must, “like a colt’s, for work be shod and made to tread the mills of toil.”

A.—INDUSTRIAL ARTS.

A study of the world’s industries becomes a valuable bit of school subject-matter, if used to give pupils—

1. A background of fundamental information.
2. An appreciation of—
 - a. Different men’s work in the world.
 - b. Division of labor.
 - c. Highest coöperation.
3. The ability to choose for their life-work what they can do best for their highest self-realization, whether that be post-setting, cooking, or prescribing medicine for the ill.

NOTE: Such study prevents wrongly or carelessly chosen work—work that narrows the mind, produces self-seeking, shirking, or loss of faith in one’s fellows; that engenders bitterness and discontent with life—work for which the individual has neither ability nor taste—work chosen because of some false notion that a man is made by the *kind* of work he does, rather than by the *quality* of that work.

Keeping in mind the three aims given above, it seems natural that the work of the primary grades should be chosen largely to satisfy the first aim, that of intermediate grades to satisfy the second, and that of the grammar and higher grades to satisfy the last.

Since many books on all phases of industrial or occupation work are now available, teachers of primary grades need no detailed instructions here regarding paper cutting and tearing, modeling in some plastic material, weaving rugs, or making baskets. Fitting up a sand-table to show a coal-mine, or Peter Rabbit in his eventful journeys about Mr. McGregor's garden, or some one of the "Seven Little Sisters," is an old story to most teachers. The study of all the processes through which wool passes from the sheep to a woolen dress or coat; the building of leaf and stick houses on the playground, or of tent-homes and caves, as children study the evolution of our present homes; the making of miniature rugs, hammocks, and other furnishings for a home; making toys, using the wood economically and to produce the best result with the least expenditure of energy, as for example planning that the edges in a toy which must be whittled shall parallel the grain of the wood, are all familiar projects.

If, in upper grades, the industrial work of boys and girls is differentiated, boys usually do more complex work at the bench, or in building a real shed needed by some boy, or by the school, for a pet animal; lay some concrete walk or some bit of masonry; do even real printing of programs or other needed school material; or apprentice themselves for a short time daily and on Saturday to some iron-worker, plumber, or carpenter. Girls take a definite course in cookery, sewing, or general home economics; care of little children; sanitation; etc.

Emergencies and first aid to the injured should be known to both sexes, as should simple household tinkering—sawing, making and putting up a shelf, renovating screen doors, gates, water-faucets; remedying simple leaks, stoppage in the plumbing at the "trap"; and so on.

Both boys and girls should be helped to study different men and women in the community, as well as in history and literature, and to find for themselves the elements of success. They may also profitably try different kinds of work during several vacations or on Saturdays, to learn that all successful work demands:

1. Skill and increasing accuracy.
2. Thinking and planning.
3. Pride in work well done.
4. Ambition to improve the work rather than to get more salary.
5. Profiting by mistakes and not repeating the same ones—being willing to learn.

A complete course of study in industries distributed by grades for all schools of the state would fill a single volume, since no two schools could possibly need the same course. Some would emphasize mercantile and manufacturing industries; others need plant and animal husbandry; others, the so-called "trades"; others, the "professions."

The Department of Education has recently issued a detailed course of study in industrial arts for rural, consolidated, and graded schools. Such experts as Miss Shelland, Miss Berry, and Professor Brace, have given this course their best effort. In larger towns and cities, there are usually employed special teachers of industrial arts who are already provided with their own good courses of study. Since, therefore, it seems unnecessary here to repeat what is so excellently done elsewhere, the entire field is outlined in a somewhat new way and each school left free to select the topics it desires to emphasize. (See suggestions on "Diagram" accompanying this book.)

ONE OUTLINE OF THE FIELD OF INDUSTRIES.

I. HUNTING AND FISHING—the primitive foundation of all industry.

A. Hunting—

1. Of food-stuff. (a) Vegetable—nuts, berries, grains, etc. (b) Animal—eggs, fowls, wild animals, etc.
2. Of material for clothing—skins, furs, etc.
3. Of material for shelter—bark, skins, caves.
4. For miscellaneous purposes. (a) Sport. (b) Extermination of some pest. (c) Curiosity and exploration.

B. Fishing (a special phase of hunting)—

1. For food. (a) Immediate needs. (b) For sale or profit.
(1) Salmon, (2) tuna, (3) herring, (4) cod, (5) oysters, etc.
2. For miscellaneous purposes. (a) Whales; (b) seals; (c) pearl oysters and clams; (d) sponges; (e) corals and shells, etc.

Characteristics necessary for success.

1. Knowledge of the habits of plant or animal desired.
2. Hard work in season and long periods of comparative idleness.
3. Patience, endurance, courage, shrewdness in some cases, careful planning in others (trapping).

NOTE: The work outlined in this section appeals most to primary pupils, who naturally cover the points in their study of primitive life, in "Tree Dwellers," and in "Seven Little Sisters," used in geography.

II. AGRICULTURAL INDUSTRIES (including Shepherding).

A. Raising plants—

1. For food, clothing, etc.
 - a. For food.
 - (1) Direct. (a) Vegetables, (b) grains and nuts, (c) fruits.
 - (2) Indirect—to feed to animals. (a) Grass and grains, (b) by-products (in silo).
 - b. For clothing.
 - (1) Cotton. (2) Flax. (3) Hemp. (4) Miscellaneous—mulberry for silk worm, wood fiber, etc.

- c. For shelter. (1) Trees—for lumber; (2) miscellaneous—grass for thatch; cotton, etc., for tent materials, etc.
- d. For fuel. (1) Wood; (2) miscellaneous—by-products from cottonseed; stems of some plants—as in firing china, etc.
- e. For pleasure. (1) Flowers, for beauty or fragrance.
- 2. For family needs only, or for sale.
 - a. For family needs only. (1) Orchard, (2) berry patch, (3) vegetable garden, (4) several small grain-fields, (5) pasture and meadow.
 - b. For marketing. (1) Less of many varieties than for family; (2) some few fruits, grains, or vegetables made the main crop; (3) some things raised that the plants and seed may be sold—nursery business.
 - c. Depending on acreage, soil, etc.
 - (1) Acreage. (a) Truck-farming for nearby-city demands; (b) corn, tomatoes, cucumbers, etc., for nearby canning factories; (c) berries, melons, etc., to ship ahead of northern season; (d) great grain-fields, as in Minnesota, Iowa, and the Dakotas.
 - (2) Soil. (a) Fertile, for gardening or nursery business; (b) sterile, to be treated by raising leguminous crops; (c) arid, to be irrigated or used for grazing.
 - (3) Climate decides selection of crop. (a) Tropical, (b) temperate, (c) frigid.
 - (4) Surface regulates kind of cultivation, whether for grain, grapes, grass, etc.

Knowledge demanded for success.

- a. Know soils.
 - (1) Chemical composition.
 - (a) What needed for crops; (b) which crops best raised; (c) how rotate crops and fertilize to keep soil up to its best.
 - (2) Moisture or aridity.
 - (a) Irrigation problems; (b) “dry” farming.
- b. Know how to select and save seed.
- c. Know how to cultivate crops.
- d. Know how to propagate plants in other ways than from seed.
 - (1) Budding and grafting; (2) layering; (3) bulbs and “sets.”
- e. Know how to systematize work. (1) Sorting, marking, testing seeds in the dull season; (2) having tools and implements ready for use; (3) keeping ahead of work so that a temporary “rush” can be met with comparatively little strain.
- f. Know the value of broadening one’s views. (1) Attending university “short courses,” farmers’ conventions, etc.; (2) sending children to the best schools for their needs; (3) taking the best periodicals; (4) trying experiments; (5) taking outings or trips occasionally, etc.

B. Raising of Animals.

- 1. For family needs.
 - a. Kinds. (1) Poultry for flesh and eggs; (2) cows for milk, butter, and cheese; (3) animals for meat (beef, mutton, pork, etc.); (4) horses or other draught animals for labor; (5) bees for honey; (6) cat and dog for helpers.

b. Problems to be solved.

- (1) Relation of plant to animal life. (a) Plant life to support animals; (b) animal products as fertilizers.
- (2) Profit or loss in keeping (a) one cow; (b) a few chickens.
- (3) Shelter demanded by animals. (a) Cost and architecture; (b) care to keep sanitary.
- (4) Knowledge of animal ailments, hygiene, care, etc.
- (5) Knowing how to use products to best advantage. (a) Milk and its uses. (b) Meats, how cured; by-products, how used; lard, hams, dried beef, etc. (c) Eggs—how preserved for winter use.

2. For profit.

a. Kinds (from which one or two are selected by a single stock farmer).

- (1) Poultry. (a) Chickens; (b) ducks; (c) geese; (d) turkeys; (e) pigeons. (2) Milch cows—dairying. (3) Beef cattle—ranching. (4) Pigs. (5) Sheep—herding: (a) raised for wool; (b) raised for flesh. (6) Bees. (7) Cats. (8) Dogs. (9) Draught animals. (10) Any of the above raised for fancy stock—(a) greater profit, but also greater risk. (11) Miscellaneous; in special regions—muskrats for fur; canaries and parrots; oysters, clams, salmon, etc., for food; game “preserves” for hunters, deer, buffalo, camels, etc.; ostriches for feathers; alligators for skin; etc.

Knowledge necessary for success.

- a. Know habits, needs, diseases, etc., of animal selected to be raised.
- b. Know how to breed and raise stock desired.
- c. Know how to prepare and to ship. (1) If alive—*e. g.*, cattle; (2) if killed—*e. g.*, poultry; (3) if fragile—*e. g.*, eggs; (4) if dressed—*e. g.*, skins.
- d. Know how to secure products when they alone are wanted. (1) Honey—apiary; (2) milk products—dairy.
- e. Be willing to work.
 - (1) Early and late in rush seasons; need of boys' and girls' help at such times. (2) With forethought in rest seasons—repairing buildings, fences, etc.

C. The privileges and pleasures of an agricultural life.

1. Its independence.
2. Its healthfulness.
3. Its financial returns if well managed.
4. Its opportunities for the finest kind of *family* life.
 - a. Time to read and converse together.
 - b. Children share all the problems, hence grow educated.
 - c. Children may specialize and still be a part of the whole life—dividing labor and coöperating. (1) Fruit grower; (2) grain grower; (3) stock raiser; (4) poultry raiser; (5) dairyman; (6) mechanic and engineer; (7) architect and carpenter; (8) housekeeper and cook; (9) seamstress; all needed on a farm.
5. Its building of character—patience, forethought, promptness, dispatch, honesty, courage, perseverance, industry, attention to duty, free will, thinking, good judgment, etc.

NOTE: The line of work just outlined appeals to pupils of every grade. Certain phases should be selected for intensive work in different grades, or even in different years with the same grade. In rural schools, especially, different subdivisions should be stressed in different years. See *School Education* during 1915-1918 for treatment of different topics.

III. MINING INDUSTRIES.

A. Digging.—1. Sand (for building). 2. Clay (for brick). 3. Limestone (for plaster). 4. Salt (for food and other purposes). 5. Soda (for food and other purposes). 6. Wells (for water). 7. Wells (for oil). 8. Iron ore (in some localities, as at Hibbing). 9. Agates, etc.

B. Quarrying.—1. Rock or stone. 2. Granite and marble. 3. Coal and slate (in some localities; *e. g.*, Pennsylvania).

C. Mining.—1. Coal. 2. Iron. 3. Copper. 4. Silver. 5. Gold. 6. Miscellaneous—in certain regions, tin, radium, diamonds, amethysts, etc.

Characteristics needed for success. 1. Knowledge of methods of work for special materials desired. 2. Strong nerves in the face of grave risk—"grit."

3. Courage in spite of disappointments—"pluck."

NOTE: The mining industries appeal to fourth-grade pupils first, and again to eighth in connection with their composition work on "World-builders" or on their future vocations.

IV. MANUFACTURING INDUSTRIES.

A. To supply food.—1. Butter and cheese—dairy. 2. Flour and by-products—mills. 3. Breads. 4. Breakfast foods, macaroni, etc. 5. Meat and fish—packing companies, preserving companies, and canning companies. 6. Vegetables and fruits—cannery, pickle factory, vinegar factory, coffee, tea, cocoa, spice. 7. Candy factory. 8. Refineries—for sugar, salt, soda, baking-powder, etc. 9. Medicines, extracts, etc.

B. To supply clothing.

1. Spinning and attendant processes. (a) Cotton; (b) linen; (c) silk; (d) wool.

2. Weaving and attendant processes.

3. Garment making—sewing, tailoring, etc.

a. Underwear. (1) Knitting; (2) sewing; (3) finishing.

b. Outer garments. (1) Men's apparel; (2) women's apparel.

4. Hat making and attendant processes, such as straw-braiding, artificial-flower manufacture, etc. (a) For men; (b) for women.

5. Glove manufacture. (a) For all purposes; (b) of many materials.

6. Hosiery and shoe manufacture.

7. Manufacture of storm necessities. (a) Coats; (b) hats; (c) umbrellas.

8. Accessories of dress. (a) Handkerchiefs; (b) buttons, hooks and eyes, etc.; (c) ribbons, braids, tapes, etc.; (d) laces, trimmings, etc.; (e) buckles, hat-pins, ornaments of all kinds; (f) jewelry.

C. To supply homes with necessities, comforts, or luxuries.

1. Wood-working industries. (a) Lumbering; (b) saw-milling; (c) carpentry; (d) cabinet making; (e) finishing of fine woods; (f) furniture manufacturing; (g) clock-case making. (h) Manufacture of musical-instrument cases: (1) piano, organ, etc.; (2) violin, guitar, etc.; (3) flute. (i) Match and kindling manufacture. (j) Basket, box, barrel, bucket, etc., manufacture. (k) Pencils, etc.

2. Clay and stone industries. (a) Brick and tile manufacturing; (b) potteries—where crude crockery is made to finest types of china manufacture; (c) enamels; (d) "concrete," cement, etc.; (e) stone dressing; (f) marble working—from mere polishing of slabs to sculptured pillars and works of art.

3. Metal working. (a) Steel manufacture; (b) zinc manufacture; (c) manufacture of all sorts of articles from different metals.

(1) Nails, screws, bolts, hinges, knobs, locks, etc.; (2) faucets, pumps, plumbing pipes, furnaces, stoves, etc. (3) farm

machinery and tools; (4) cooking utensils; (5) sewing materials—machines, needles, pins, scissors, etc.; (6) bird-cages, traps, hunting and fishing apparatus, firearms, etc.; (7) table utensils (steel, silver, even gold); (8) watch and clock making; (9) pen-points and -holders; (10) wire netting for windows, fences, and many purposes; (11) roof-gutters, trimmings, etc.; (12) beds and springs; (13) laundry appliances; and so many more articles that a complete list would be impossible.

4. Coarse-cloth, etc., manufacture. (a) Carpets, rugs, draperies, etc.; (b) bedding of all kinds; (c) towels, table linen, etc.; (d) linofelt linings; (e) awnings and hammocks; (f) straw mattings, shades, etc.; (g) leather goods of all kinds.
5. Paper manufacture for: (a) Books, periodicals, sheet music, and related material; (b) calendars, blotters; (c) stationery; (d) prints of artworks; (e) wall papers; (f) money, stamps, etc.
6. Printing (of all things named under 5).
7. Glass manufacture. (a) Dishes, bottles, etc.; (b) mirrors; (c) thermometers, etc.
- D. To supply miscellaneous wants of man. (1) Toilet articles and utensils, such as soap, brushes, etc.; (2) inks, dyes, stains, varnishes, paints, etc.; (3) flags; (4) children's toys, adults' games and sports equipments; (5) appliances for stores, banks, etc.; (6) appliances for all forms of transportation.

Characteristics and knowledge necessary for success in manufacturing.

1. Keeness to see need of an article and cost of supplying it.
2. Ability to buy with judgment and economy the raw materials.
3. Ability to secure loyal coöperation from necessary helpers. (a) Justice in dealing with men; (b) patience in training unskilled labor; (c) recognition of ability; (d) reasonable protection of men from harm—sympathy; (e) leadership qualities, etc.
4. Honesty in producing a product that will be the best of its kind for the cost.
5. Knowing how to market the product.
6. Ability to profit by mistakes, checking waste, and constantly improving the efficiency of the plant, hence knowing the whole business well.

NOTE: Manufacturing industries especially interest fifth- and sixth-grade children who are at the age to experiment. Definite values lie in the making of many single articles, and the manual training course can be closely related to this interest. Girls can spin, weave, make soap, and cook. Boys enjoy engines, derricks, mechanical toys, and a real telegraph system. The section on "characteristics," etc., is for use in eighth grade, in the study of vocations.

V. COMMERCIAL INDUSTRIES.

Community life demands coöperation, resulting, finally, in division of labor. At that stage men sell their surplus products, thus earning a livelihood for their families. There seem to be three main kinds of supplies to be sold, though the line of demarcation can not always be clearly drawn. These are *labor*, *produce*, and *thought*, each designated by the prominent element present, even though the other elements are never absent; for example, a delivery-boy who sells his labor, handles produce, and has to use thought.

- A. The more usual forms of labor (unskilled and skilled) are exchanged for money by the following persons: Baker, carpenter, printer, pavement maker, plasterer, paper-hanger, barber, drayman, liveryman, mason,

blacksmith, wheelwright, locksmith, chair-caner, wagoner or cartwright, day laborer, laundryman, washer-woman, charwoman, house-cleaner, tinker, plumber, shoe-repairer, wood-sawyer, serving-maid, seamstress, waitress, saddler, chauffeur, maid of all work, man of all work, employment agents, clerk, bookkeeper, stenographer, ploughman, hired-man, farm-hand, butcher, nurseryman, gardener, surveyor.

Qualities needed for being a successful laborer.

1. Willingness to work—industry.
2. Honesty in service as well as in relation to employer's property.
3. Knowledge of the labor undertaken—more or less skill demanded of particular sorts.
4. Willingness to do what the employer wants—that is, flexible, adaptable, but not servile.
5. Possessed of initiative or of power to shoulder the responsibility and use judgment if left alone to do the work.
6. Promptness and reliability.
7. Physical strength for the task selected.

B. Men who give their time, labor, and thought, to the handling of produce which they buy and then sell at a profit so as to insure them a living, are called merchants. Some well-known ones are the grocer, dry-goods merchant, clothier, hatter, milliner, shoe merchant, jeweler, hardware merchant, florist, confectioner, stationer, book dealer, laces-, hosiery-, and glove-shop keepers, druggist, fuel merchant, millstuff and feed-store keeper, bird dealer, furrier, publisher, dealer in rubber and sporting goods, automobile-shop keeper, dealer in conveyances, furniture dealer, art dealer, music dealer, real-estate dealer, and dealer in antiques.

Some qualities demanded for this industry:

1. Faithfulness to duty; promptness, dispatch, reliability, etc.
2. Good judgment in purchasing—ability to see the consumers' needs, the value of the goods if held some time, etc.
3. Ability to display, advertise, and so to dispose of the merchandise.
4. Ability to direct helpers if the business is large.
5. System, so as to check up losses and prevent them, or to add to the lines of profit.
6. Understanding human nature and fitting business to such knowledge.

C. Men who give others the benefit of their thought, judgment, imagination, and ideals, incidentally earning a livelihood thereby, make the third group, often called professional men. The group includes bankers, brokers (of the right sort); formulators and managers of insurance, transportation, and utility corporations; lawyers; civil engineers; architects; statesmen; scientists; inventors; physicians; artists; music composers; authors; teachers (real teachers); pastors; efficiency experts; vocational advisers. Home-making and parenthood are growing to be classed among the professions.

Characteristics demanded for success in the professions:

1. The general characteristics demanded for success in any line—honesty, industry, dependableness, etc.
2. Superior intellectuality.
3. Long preparation for life work—in school, in travel, in apprenticeship, etc.

4. Broad general culture and pleasing personality—clean, frank, sympathetic, etc.
5. Altruism, willingness to lose one's life in service for mankind, thinking less of money returns than of the good one may do.
6. The will to do one's duty in whatever form it appears—to be true to one's ideals.
7. Superior power of expression—in words, acts, writing; on canvas; in whatever medium necessary for the profession selected.

NOTE: The commercial industries will naturally appeal to upper-grade pupils, whose arithmetic, geography, history, ethics, vocational guidance, and composition subject-matter relate to the field or utilize material found therein.

B.—THRIFT.

In the daily use of material from first grade up, thrift, but not littleness or stinginess, should be cultivated. The value of thrift becomes evident to intermediate- and upper-grade pupils as they study real industries and note the relation of expenditures and waste to profit, in by-products as well as in the main output.

See pages 104–124, 177–188, and the “Diagram” accompanying this book, for suggestions for teaching thrift to boys and girls.

C.—VOCATIONAL GUIDANCE.

This has been so often referred to in the subject-matter outlined for each grade, that little more needs to be said. See pp. 55, 95, 122, 144, 152, 156, 175, 180, 188, as well as the “Diagram.”

At the period of adolescence “the one great field of thought which appeals to the child is the field of human adult industry. He wants to do real things in a real way, and is satisfied with doing miniature things in a miniature way only as a substitute and illustration of the reality he seeks.”

Boys, especially, want to earn money, and should therefore be encouraged to learn about trades, industries, and professions—not to make early and irrevocable choice of what they will do, but to know better what the world wants done and the sort of persons needed to do that work.* They should be encouraged to try whatever occupations parents will consent to their trying.

Conversations should constantly be had over the knowledge, temperament, and character, requisite for success in various gainful occupations. Children should be helped to see that, *unless it is absolutely necessary to do so*, it is a very short-sighted policy to leave school early for the sake of earning a relatively small sum, when more education might later give a greater earning capacity, to say nothing of the increased ability to enjoy life.†

* See books on vocational guidance referred to on p. 301; in the Minnesota School Library List, p. 27; and in articles on the subject.

† See (1) *The Elementary School Journal*, p. 369, March, 1916, “The Curriculum and Vocational Guidance.” (2) *Education*, Vol. 34, pp. 81 and 153, or October and November, 1913, article by Coover showing that more education pays. (3) *Journal of Education*, p. 651, December 30, 1915—Winship's description of the work in Portchester, N. Y., and Cincinnati, to prove the value of schooling. (4) Department of the Interior, Bureau of Education, Bulletin No. 22, 1917—“The Money Value of Education,” Ellis—15c.

V.—CITIZENSHIP.

In an effort to find the name best suited to the study of those problems of human adjustment which make for higher ideals of institutional as well as of individual life, *citizenship* was decided upon. It includes the familiar subject of history, together with elementary phases of civics, economics, sociology, and ethics.

There are two main means of teaching this important subject:

(1) DIRECT EXPERIENCE, demonstrated (a) in the *conduct* of pupils in daily life and particularly in the institutional life of the school; (b) in the *organization of clubs* and societies which need the making of a constitution and the exercise of simple parliamentary practice; (c) in keeping up with such *current events* as interpret the community life and point to the community's problems; and (d) in the study of *civics* (outlined below).

(2) INDIRECT EXPERIENCE, gained through a study (a) of historical material and of real *history*; (b) of ethics; and (c) of literature.

Because of the close inter-relationship between history, civics, current events, and moral training, fully differentiated courses in the several subjects could not be planned. They will be seen to overlap one with another, as well as with science and industry.

A.—HISTORY.

In history an attempt has been made to prepare a cumulative course, unified (to the teacher) by one big thought,—nationalism or internationalism,—and distributed through the grades (1) to correspond with children's developing consciousness of institutional life, (2) to interrelate with the other subject-matter of a grade so that each year's work may be a unit, and (3) to adhere as closely as possible to the recommendations of the Committee of Eight.* The slight variations that are made from the committee's course can be fully justified, since, as the report says,—

"If the unity of the general theme can be realized by some other treatment in individual instances, by omissions, or by more detailed work, this will not interfere with the aim of the plan. The capacity of pupils differs from school to school. No plan can be regarded as adaptable to all conditions. Above all it must be remembered that the fundamental aim is not to store the child's mind with many detailed facts of general history, but to make certain impressions which shall exercise a guiding influence over the child's intellectual growth; to furnish him with a framework into which his later reading or study shall place what he acquires."†

* Charles Scribner's Sons. Necessary in every school library.

† The course planned has also taken account of the report of the Committee on Elimination, printed in Bulletin No. 51, in which "for purposes of examination only, 'there are suggested 37 dates (to be acquired during six years, hence an average of about six a year); 40 biographies (in eight years); 4 colonies, not over 10 battles, and, besides our local Minnesota history, only about 10 important historical topics, for acquisition in two years.

THE GROWTH OF NATIONALISM.—OUTLINE OF THE COURSE.

Grades I, II, III.

I. Primitive Life.

- A. Tree-dwellers. B. Cave-men. C. Minnesota* Indian life in its primitive stages. (And history in connection with special days.)

Grade IV.

II. Tribal Life.

- A. Hunting tribes.
 1. Land hunting.
 2. Fishing.
 3. Warring tribes such as the Goths, Huns, Vandals, and Vikings.
 B. Shepherd tribes.
 C. Agricultural tribes.

Minnesota Indian life in its tribal stages: The Six Nations; the Eskimos; the Cliff-dwellers. Hebrew shepherds. Vikings.

Grade V.

III. National Life.

- A. Chinese (1 to 2 weeks).
 B. Greek (10 to 12 weeks).
 C. Roman (10 to 12 weeks).
 D. General changes in Europe during the 1000 years which followed the breaking up of the Roman Empire (about one week).
 E. The United States.

1. Pre-national life in America.

- a. General effect of discovery, exploration, and settlement, noting the place Minnesota had in all these movements (10 to 12 weeks).

Grade VI.

- b. European ancestry of Americans. Review earlier work on Greece and Rome (4 to 6 weeks). Expand the barely touched-upon interim between the decline of Rome and the discovery of America into a study of the European peoples whose children made (and make) America:

- (1) The Germans (3 to 5 weeks). (2) The French (1 week).
 (3) The Spanish (1 week). (4) The Norse (1 to 3 weeks).
 (5) The English (7 to 9 weeks). (6) The Dutch (1 week).
 (7) Other nationalities to fit local needs.

Besides this study of individual peoples, children's attention must be drawn to the general social, political, and religious life of the middle ages (1-2 weeks), the crusades, pilgrimages, and commercial travel (2-3 weeks), the discovery, exploration, and colonization of the New World seen from the viewpoint of a resident of the Old World (2-3 weeks), and the recognition of the fact that America is still the nation's "melting pot" (2-3 weeks).

Grade VII.

- c. The Colonial period of United States history, with the Revolutionary war to end it. (One year).

Grade VIII.

2. National life. Meaning of July 4th, the New Republic, territorial expansion, the great West and Northwest (with Minnesota's place noted), industrial expansion, commercial expansion, the discovery of gold in California, danger to the Union, problems after the Civil War, problems today (5-6 months); Minnesota's parallel development (3-4 months) to be treated alone near the end of the year or to be woven into the general United States history throughout the year.

IV. "Internationality," the hope of the future (2 to 4 weeks, if the teacher can get it in).

- A. Movements towards world peace before 1914.

* Substitute for Minnesota any desired state.

- B. The present Great War—present and probable future effects of this war on world peace, on industry, on commerce, on Americans' attitude towards the alien.
- C. America's problems.
- D. Minnesota's problems.
- E. Our individual problems.

GRADES I, II, AND III.

In childhood—as in the childhood of the race—fact and fancy are inextricably mixed. With no developed sense of either time or space, the child sees without shock strange happenings occur in juxtaposition. Myths, legends, traditions, and folk-tales, developed by child-like peoples, are the natural materials to satisfy children of these grades. People are as yet to the child little more than objects to be used for his own ends, hence he cares little for consistency but wants people in action. Life is a puzzle, and he is interested to learn how heroes of history and of literature acted in dramatic situations still simple enough for him to conceive.

This is, too, the period when the child is learning to know the world about him and his place in that world.

The work in "history" is closely allied to that in language, geography, and industry, to all of which the teacher should constantly refer.

In connection with the celebrations of special days, it will be natural for children to be told stories or incidents of great men and women of the past. Although the days to be celebrated will be, in the main, identical for the first three grades, the point of emphasis can be varied, as the following suggestions will indicate:

Grade I, October 12, Columbus—His boyhood, what people knew of the world 450 years ago, why we celebrate October 12. *Thanksgiving*—Stories of Pilgrim children such as Oceanus Hopkins, Peregrine White, Betty Alden, and Rose Standish; of Myles Standish; of Indians. *Christmas*—The story of the shepherds as they saw the star and as they visited the Christ-child in the manger. *February 22*—Washington's boyhood, with his rules of behavior.

Grade II, often united with grade I. If not, review work of grade I and add or emphasize the points of resemblance in Minnesota history. For example: *October 12*—To the story of Columbus as a discoverer add the story of the Norsemen and relate it to Minnesota's "Kensington Rune Stone." *Thanksgiving*—Show how similar the conditions of the Minnesota pioneers were to those of the Pilgrims: same food, clothing, and shelter problems; same difficulties with Indians. *December 25*—Add the story of the wise men, and how they followed the star. Add *January 17, Franklin*, with emphasis on his boyhood. *February 22*—Maxims from Washington's copy-book used for copies; his later life, including stories of Lafayette and Kosciusko if fitting the community. Add *May 30*, Function of Memorial day; bravery emphasized.

Grade III, October 12—Relation of Columbus to the work of later explorers, some of whom (LaSalle, Joliet, Radisson, Groseilliers, etc.) came to Minnesota. *Thanksgiving*—Compare the life and work of Winthrop with Sibley; of John Eliot with Hennepin and Marquette; of King Philip with Wabasha, Red Wing, or other Indian chiefs in Minnesota's early history; of the first white children of the Plymouth colony with the first white children of Minnesota. Add *December 17, Whittier*, to portray New England life after the early pioneer days were over, and to compare the scenes in "Snowbound" with similar situations in early Min-

nesota history. *December 25*—The flight to Egypt. Herod. Christ as a boy. Early Hebrew history, such as the story of Joseph or of David. *January 17*—Franklin's inventions. Add *February 12*, *Lincoln*, with emphasis on his boyhood, and pioneer conditions in Kentucky noted as similar to those in Minnesota. Story of Minnesota's Governor Johnson, because he was like Lincoln. *February 22*—Washington as president. Making the United States flag. Compare to Governor Sibley, of Minnesota. Sibley House at Mendota. The Minnesota state flag. Add *Bird and Arbor Day*, with emphasis on the need of conservation for the sake of Minnesota's future. *May 30*—Barest outline of Civil War, with emphasis on what Minnesota's sons and daughters gave for the Union.

In schools of several grades to a room, some of these days should occasionally be omitted and July Fourth, Minnesota Day, Peace Day, and Flag Day substituted.

In the second and third grades it will be found that the daily life of primitive peoples appeals. Although the child is in the midst of a complex civilization, he has no appreciation of the whole. As he studies primitive peoples in their search for the necessities of life, he can gradually be led to appreciate and to interpret present-day activities. In principle, the life of Bodo in the "Tree Dwellers" is much like his own, filled with the spirit of progress or the desire for investigation, discovery, and exploration. Like Sharp-tooth, who typifies the conservative element of society, the child's mother warns him of danger and holds him back from rashness. After a time, like Bodo, he finds a companion with whom to cooperate, and modern "society," with its need of give-and-take, begins for him. Although the child cannot analyze the thought, he does understand that, as the tree-dwellers change into cave-men, individual freedom gives place to the welfare of the social group. He sees Firekeeper making the home, developing worship, and teaching the young. He sees Strongarm, as leader, caring for all, showing forethought, inventiveness, and patience in studying out the problem of fire-making. He sees Sharpeyes displaying bravery, persistence, and love of others. He recognizes the need of division of labor, and can be led to interpret the life about him more intelligently.

Closely associated with this study of typical primitive peoples, will be the early Indian life of our own state, the home of "Hiawatha." This study of beginnings is not to be over-emphasized, but should be used only to help children realize how group-life grew and how men learned better and ever better ways of doing things. Present-day problems should be either the line of approach to or the application of this study.

In the third grade special effort should be made to gather together all incidental teaching of "history," and to unify the courses in citizenship, industry, and science.* Teuton and Norse mythology, as well as that of Greece and Rome, should be drawn upon as source

* See plan of alternation suggested under third-grade geography. Problems there given can with very slight changes be suited to history work.

material. Mrs. Carley's description† of some third-grade work in history based on the study of Chicago's development, and accomplished by pupils in the Francis W. Parker school, is so excellent as to warrant the quoting of large parts. Minnesota teachers will find that little more than the substitution of some town or city in Minnesota for "Chicago" is needed to make the outline fit local conditions. The study is especially applicable to the Twin Cities, Duluth, and Winona, although of course no teacher would use all of these topics in any one year with a single class; the list is however very suggestive.

"The contrasts between the lives of people who lived here fifty to a hundred years ago, and the children's own, helps them to appreciate their own environment and comforts. Chicago is so young that there are people still living who can tell personal experiences of the early days, and these, with visits to historical spots and museums, make the study more real and vivid. The purpose is not to teach events, but to show reasons for the beginning of the city, its connection with the rest of the country—the interdependence, in general, between the city and the surrounding country. To have children image the landscape, not the map, many excursions to type-areas are necessary. This also enables them to think of conditions around Chicago as they existed long ago. It is essential to make a study of some of the organized civic activities of the present day, to emphasize the beginnings, the growth, and the reasons for instituting them.

"The children write their own histories of Chicago. Each child has reprints of thirty or forty pictures which the teacher has collected from every possible source to illustrate this work. Covers are made for the books, and they are simply and artistically bound. The motive of making a book which is to be both complete and beautiful, appeals very strongly to all of them. The topical outline given below will give some idea of the contents of each child's book:

How Chicago looked a hundred years ago.

Stories of Indians—Indians' dress; Indian homes—wigwam, summer home, winter home.

Indian village along creek where State street is now. Industries—Basketry, pottery making, weaving rush mats, weaving blankets, cooking.

How Indians gather wild rice.

Indian games.

Hunting and Fishing Devices—Elk hunting; buffalo hunting, hunting buffalo with decoys; antelope hunting; hunting deer with decoys; hunting bears; bear dance, snow-shoe dance; trapping animals; fishing with soap-root; fishing with bow and arrow; spearing fish; weirs.

Picture writing.

Building canoes.

Building Fort Dearborn. (Minnesota has Fort Snelling.) Plan of the fort.

Mr. Kinzie comes to Chicago. (Every Minnesota town contains some descendant of a pioneer whose journey west was full of incident and adventure.)

The Kinzie mansion. Fur trading—stories of trappers. Stories of French voyageurs.

How Chicago looked in 1812—Tecumseh; Revolutionary War; War of 1812; first Indian trouble; massacre of Fort Dearborn; Black Partridge.

After the War of 1812.

Fort Dearborn rebuilt.

Coming of settlers; how they traveled; traveling with ox-carts, sledges, prairie-schooners, flat-boats, pack-horses.

Abraham Lincoln traveling to Illinois; his trip on a flatboat down the Mississippi river.

Mr. and Mrs. Kinzie's traveling experiences. How Chicago looked in 1831.

Old-fashioned fireplace; cooking.

River water; wells and sweeps; selling water from cart. Water system—log pipes; first city water-works; the drainage canal; intersecting sewers; plan for north-shore sewers.

Street problems—Lifting Chicago out of the mud. Playground plan.

† In the Seventh Year-Book of the Superintendents' and Principals' Association of Northern Illinois.

GRADE IV.

When pupils have reached the fourth grade they have ceased to class people and objects together. They recognize the difference in the reactions which people make to people, and those which people make to their material environment. During the development of this social consciousness, while yet children are trying through competitive games and through interchange of experiences, to know one another, they grow interested in adults, the "Olympians" who can do "just as they please," and yet who do not seem to take advantage of their privileges. Children can not, however, yet grasp complex social situations. Their attention becomes riveted at any one time on just one individual and what he accomplishes. Therefore the work in history may often be done by the proper use of biographies, selected and presented so as to portray the age in which the character lived, disclosing the life of all the people. If the child's imagination is cultivated so that he sees the scenes, so that the setting is clear and the action plain; if much enriching detail is employed; if dramatization is used to strengthen the child's understanding, to check the rationality of facts offered, and to help him feel the situations, the intermediate-grade pupil will "love history." Whenever possible, he should be led to see how the individual character was influenced by the group in which he lived and how he and his group influence our life today.

The range of stories and biographies from which to select is so broad as to make it unnecessary for any two schools to do exactly the same things, although a few are later suggested.

Although fourth-grade pupils are still unable to comprehend the significance of the sequence of national development, (outlined on p. 166), they can be led to enter into the life of those earlier tribes and nations which grew out of primitive conditions and which bridged the gap from no solidarity in group-life to our own modern and complex civilization. This study should be preceded by the sort of review that will best emphasize the *growth* of tribal life; hence, a review of primitive life in which: (1) Each man lived alone; (2) the child had very early to fend for himself; (3) fire was discovered and used; (4) language developed; (5) family life developed; (6) labor was divided; and (7) a larger family life (or group-life) evolved. The study of tribal life may be subdivided as follows:

A. Hunting tribes, including fishing and warring tribes. For stories, use parts of "The Brown Baby," "Manenko," and "Agoonack," from "Seven Little Sisters" and "Each and All;" "Robinson Crusoe;" "Docas;" "Hiawatha" (parts not used in primary grades); and other Indian boyhood stories such as the Eastman books and Cooper's "The Last of the Mohicans."

B. Shepherd tribes—For pictures of this life see the story of "Jeannette," in "Seven Little Sisters," and "Each and All"; "Heide;" "Robinson Crusoe;" the life and paintings of Millet; the biographies of Abraham, Joseph, Moses, David, and others which teachers find suited to their needs.

C. Agricultural tribes, represented well by some of our American Indians, where the women tilled the soil; gathered, ground, and cooked grains; wove blankets; made baskets, pottery, etc. See "Docas"; "Hiawatha" (and Moundamin); stories of Squanto's teaching the Pilgrims to plant maize; and the life of "The Six Nations." As Pilgrim and Virginia life are studied, children recognize the difficulties of an agricultural life and appreciate the setting apart a day of Thanksgiving when the harvest did prove bountiful. Robinson Crusoe's troubles also help to point the lessons of forethought, thrift, and care. From "Seven Little Sisters," and "Each and All," parts of the stories of "Louise" and "Pense" can be utilized.

GRADE V.

As the child grows in social consciousness, (see grade IV,) learning how groups have met or do meet life's changing conditions, and as he explores and invents things for himself, he discovers everywhere not only the necessity but the benefit of coöperation. "Team work" takes on a new meaning, and he feels, more or less definitely, that still closer organization of group-life will benefit mankind. He is therefore ready for a study of nations and of what each has done in its particular part of the world. Facts and dates become valuable only when needed in studying the bigger "problems" of why one nation has risen to high rank, how long it held its supremacy, and why it ever fell; what each nation has contributed to the world's progress and the relationship to the geography of the earth of the westward advance of frontier life. Four typical nations are chosen. (See Outline, p. 166.)

The study of China *may* be omitted if a teacher so desires. It was selected as the type of an Oriental nation, as an example of a non-progressive group, and because the early earthworks and the later brickwork of the "Chinese Wall" are thought by some historians to have definitely influenced European civilization, turning back upon Europe the hordes of warring and nomadic tribes that once harassed China. Again, the present "Awakening in China" points to future interrelations which the next generation of businessmen can better interpret if they learn as boys somewhat of China's history.

Since Greece and Rome have had so marked an influence on present-day civilization, no further defense is necessary for the study of topics from their history. Hurrying over a thousand years, just noting that with the decline of Rome her extensive empire changed into *many* European nations, the Course of Study takes up the beginnings of European life in America.

NOTE: In schools where pupils in great majority are likely to leave at the end of the fifth year, somewhat less of Grecian and Roman life, and probably nothing of Chinese life, should be given, so that the time can be put upon a more extended study of the United States than is here outlined. Children who may have no later schooling should have at least a cursory knowledge of their own land and of their obligations to a country which has done and is doing so much for them.

China.—For the work on China, the story of "Pense" and her brother "Lin" in "Seven Little Sisters," and "Each and All," supplemented by reference readings upon life in China, and by the story of Marco Polo's visit there, will provide all that the teacher needs.

Greece.—Through the study of Greek myths, legends, hero-tales, and biographies, the real life of the Grecian people should become known. Children and teacher must make themselves a part of this life, working and playing with these wonderful yet simple people; with them accounting for the mysteries of nature in fanciful tales of Zeus, Pluto, Ceres, and Aurora; learning to emulate the virtues of Theseus, Perseus, Jason, Ulysses, and the heroes of the Trojan war; seeing what the world has gained from Grecian law-givers, soldiers, rulers, and teachers of art, music, and philosophy. Through a study of the larger causes of Greece's rise and decline, the child can be led to see that a nation's strength depends on the high moral conduct of its individual members—citizens with civic consciences as sensitive as personal consciences. By a comparison of Grecian conditions with modern, the child gets a basis for right civic conduct now and in adulthood.

Rome.—From the study of Rome, pupils should get the feeling of the world's great indebtedness to that city, for (1) law and government, (2) practical arts such as were seen in good roads and aqueducts, (3) the spread of a religion which was mightier than the sword, and (4) the dissemination of culture which Rome took from Greece and tried to make her own. The teacher should study the report of the Committee of Eight, pp. 26-34, for "problems" and reference material, and add to these topics that of the Decline of the Roman Empire and the final formation of the nations whose citizens, because of love of adventure, religious liberty, conquest, or greed, sought the New World and started our own United States. As this forms the core of the sixth-grade work, only enough time should be given the subject in fifth to pave the way to the next big topic, E. Dramatization of events which can best be understood by acting; making in miniature the Acropolis or the Forum, for example; and picturing events which the imagination can paint; are means to be frequently employed.

From p. 166, E, 1, a. The First Europeans in America

- (1) Came by fortunate accidents—Leif Ericson; Columbus.
- (2) Found native American tribes (review Indian life).
- (3) The period of discovery and exploration. Every normal fifth-grade child is ambitious to learn the outside world, and since explorers did what each child longs to do, the lives and adventures of men like Balboa, the Cabots, Raleigh, Champlain, Marquette, and Joliet, are of deep interest. Equally attractive are the frontiersmen, who showed such sterling and admirable qualities of character, while they maintained themselves against dangers and foes.
- (4) The period of settlement, with especial emphasis on the two types of colonial government exemplified in the Massachusetts and Virginia colonies.

GRADE VI.

In this and later grades the work outlined by the Committee of Eight, and employed as the basal organization in half a dozen excellent modern texts, can be used with little modification—only such as is necessary to suit the abilities and needs of pupils in a given locality. The problems therein proposed and the references given are the best possible for the purpose.

A brief review of the large points made in each of the earlier grades gives a good start to the general question of "the brotherhood" of all Americans—sprung, as we are, from those nations which rose as Rome fell. The work of this grade *begins* to resemble real historical study. More than before, pupils take the initiative in proposing "problems," in proving points of debate, and in learning to think from effect to cause before offering final judgment upon an individual or a nation. As has been frequently said elsewhere, the method of study should be varied to suit the needs of different localities, but, in general, the "problem" method, illustrated fully in the geography course, has proved efficacious for securing growth in power (1) to see a point, (2) to stick to a topic, (3) to recognize a change of base, and (4) to see the relation of a few subordinate points to some large one.

Besides being thus valuable as a means of selecting and grouping important facts, "problems" become excellent means of conducting a review, for a new problem may require the use of all ground covered in such new guise as to make it thoroughly alive. The careful building of an early English castle on the sandtable* has fixed forever on many pupils' minds the daily-life details of the several classes of people who worked and played in feudal days.

Children's English is also definitely improved through their keeping of note-books in which they outline reasons why certain groups of settlers left the Fatherland for America; in which they take two sides to a debate as to whether these people showed wis-

* Excellent results have been obtained by Miss Etta Howell, Winona Normal School.

dom or not in coming; in listing the traits of character which different nationalities brought to America and which we should attempt to emulate; in showing the industrial, commercial, or political conditions existent in different European countries at some given date; in picturing the conditions under which each group lived in Europe before it came to America, and consequently the different ideals they brought with them. Which of these ideals should be perpetuated and which displaced for the good of Americanism is a topic well to expand under Ethics.

GRADE VII.

The work of this grade is the more careful study of the early history of the United States from its European beginnings (learned in the sixth grade) to its birth as a republic. (See topics suggested by the Committee of Eight.) Although some of this ground may have been traveled before, it will be so differently treated and will use so much new material that all possibility of monotony will be precluded.

At the adolescent period, when boys, especially, are beginning to think of their vocations in life, pupils develop a greater interest in local situations, in current events, and in present social conditions. Possessed by a desire to understand things as they are (to get beneath the surface of life), and by an ambition to influence the future (to make things what they should be), pupils in grades seven to nine covet and deserve to be given such impartial study of facts leading to present events as will develop judgment of values, right attitude towards discrimination and verification of facts, selection of authorities, and prediction of effects from given causes.

While the seventh-grade teacher continues to further the aim of the sixth, which was to help pupils to see relationships rather than merely to memorize facts and dates, he should seek to stimulate increased reasoning power and sounder judgment: besides reasoning from effect to cause, some thinking from cause to effect should be done by pupils, as they solve the subordinate problems which naturally arise in the solution of the large ones of the year. Incidentally, as it is needed in geography, in history itself, or in reading, the history-work of earlier grades must be recalled and kept reasonably fresh and ready for use.

In the study of "the struggle for territory," one seventh-grade class* organized the work around problems similar to the following. (1) Prove that conditions were favorable for adventure and exploration during the fifteenth century. (2) Prove that Spain had a right to territory in the New World. (Later, France and England were substituted for Spain in this question.) (3) Prove that the

* Taught by Miss Anna McGuane, of Seattle, Washington.

colonists who came to Jamestown were not well fitted to make settlement. (Later, the opposite affirmation was to be proved about the Massachusetts colony.) (4) Prove that the Jamestown colony showed a slow, steady growth. (Another problem was to prove that the colonies of Massachusetts showed rapid growth.) (5) Show why the Mississippi Valley was disputed territory.

Problems for work on succeeding topics are also suggested: (1) What caused the gradual estrangement of the colonies from the mother countries? (2) Prove that the idea of union was gaining ground. (3) Show that the idea of *self-government* developed gradually. (4) Find the causes for the growing divergence of England and her colonies. (5) What were the people's problems in the Revolutionary period? (6) What were the problems of the critical period at the close of the war? (7) Prove that we still owe a debt to the men who framed and signed the Constitution and who put the government into operation.*

GRADE VIII.

As indicated in the outline of the entire Course, (p. 166,) the work of the eighth year is a continuation of the history of the United States from the time of Washington's inauguration to the present. At least one third, possibly one half, of the year should be given to the study of Minnesota† in its relation to the whole United States, to the West, and especially to the Northwest.‡ As Professor Alvord said a year ago, "The real history of the West does not belong to the days of long ago. Much more important for us are the days when the actual settlers carrying their farm utensils on flatboats or in their covered wagons were seeking the fertile lands of the West to make homes for themselves and their followers. History is not confined even to those days of the pioneer, for many a historical problem of utmost importance may be found in the civilization that is almost contemporary. Here in Minnesota is [also] the problem of the "melting-pot." [Our] population has been drawn from many states in Europe. Men with foreign language and foreign customs have settled here in [our] midst and are gradu-

* For still other problems see *Teachers' College Record* Sept., 1915. † Or, any state desired.

‡ Teachers should watch for two books devoted to Minnesota, one, in story form for intermediate grades, by Miss Pollock; the other, a superior treatment for eighth- or even ninth-grade pupils, by Miss Mary Carney. Briefly, the topics Miss Carney suggests are: Geographical conditions which influence Minnesota's development; Indian life; explorations; period of permanent settlement; governmental changes in Minnesota; Minnesota as a state—prominent men, her place in the Civil War, the Sioux trouble, railroad building, agricultural development, flour milling, iron mining, immigration, education of the youth. While Miss Carney was working out her course in Hibbing, teachers at Mankato and Winona were independently bent on the same mission. The result of a half year's work with Winona pupils was made permanent for them in a hand-made booklet, named "Minnesota." The writing of the topics became a part of the English work and the binding of the book a part of the industrial work. The table of contents, here quoted, will give those interested an idea of what was accomplished. *Part I.—Early History of Minnesota*—A. The Dakota or Sioux Indians: (1) Manner of living and occupations; (2) customs and ceremonies; (3) mounds and builders; (4) names derived from the Indians. B. First White Men: (1) Names of men; places visited; fur trading; (2) mission of white men; early roads and mail routes; (3) Fort Snelling. *Part II.—Minnesota as a Territory*—A. Organization and Development of Territory. B. Conditions of Country in 1849. C. Conditions of Country in 1850-1855. D. Transition to Statehood. *Part III.—Minnesota as a State*—A. Progress of Minnesota After Becoming a State. B. Outbreak of the Indians. C. The State Capitol. D. State Emblems. E. State Institutions; (1) Prison; (2) reformatory; (3) training-school; (4) soldiers' home; (5) insane asylums; (6) school for defectives; (7) state normal schools and university. F. A Chronicle of Recent Events; "Minnesota," by Governor Hammond; the state song.

ally becoming assimilated with the American people. One of the most interesting problems that can be conceived concerns itself with this process of assimilation. How is the descendant of the Vikings being turned into an American?"*

Since vocational studies are the unifying topic of this grade, the emphasis must be placed upon industrial and commercial history. What better spur to ambition can be made than (1) to help a boy or girl see the causes and effect of the long train of industrial changes made in the United States in the last one hundred years? (2) To predict the future of America, of "our state," and of "our town"? And then (3) to recognize that youth is needed to further the world's progress—that there is work for every child who is willing to shoulder his share of it?

As he sees how full the world is of work to do he must also see how impossible it is for any one to do more than a small part, and hence how necessary it is that he choose his life-work wisely—whether it be laying railroad-ties to prevent unnecessary accidents, washing milk-bottles to supply sanitary food to the people, or healing the sick of soul or body.

As he reviews the large events of the centuries, noting the changes which have produced our own wonderful nation, he must see that coöperation, of which division of labor is the highest form, is at the root of it all.

An analysis of division of labor shows that unless each laborer keeps in touch imaginatively with his fellows, he soon fails to appreciate what others are doing for him, and when he loses this sense of appreciation, he makes his fellow-man's work harder because of lack of sympathy, or he does his own work less efficiently—not realizing, perhaps, how so little a thing as failing to put a nut on a bolt may cause a city's ruin, provided that bolt be in the span of a bridge against which a great flood of water pours from a breaking dam. One must not let the sort of work he does estrange him from his fellows. It is not what one does, but how he does it, that counts; only to have done his task the best he can justifies any man's pride in himself.

Eighth-grade boys and girls must go out into the world with ideals of good workmanship. These ideals must be built upon: (1) *Knowledge* of how things are done; (2) *sympathy* for the dangers and risks that others run for the world's good; and (3) *willingness* to shoulder a share of the common load while still doing individual duties.

* Vol. I. No. 1. "Minnesota History Bulletin."

This course rounds out the study of national life, and should, in either history, ethics, or civics, lead to a consideration of internationalism (as outlined on p. 166). Reviews, as was suggested in the sixth-grade course, should be by large topics such as tariff reforms, secession of states, states' rights, nullification acts, territorial expansion, and so on, each topic suggested as a live problem.

A school play such as "America, the Wonderland," or a play based on the life of Lincoln (including "The Perfect Tribute"), or upon Antin's "The Promised Land," would make a fine close to the year's work.

What to expect at the end of the eighth grade.—Dr. W. W. Charters says: "In answering this question we must define what we mean by the word *know*. One may have a great mass of facts and ideals that are a part of his make-up, but which he cannot organize or state. Or he may have facts that he remembers definitely. Now looking at the question from the first standpoint, I should say that the pupil should read as widely as he possibly can—not to remember all, but to absorb. The actual facts to be remembered need not be many. In dates, if he remembers 1492, 1607 or 1621, 1776, 1785, 1791, 1861, besides those he picks up naturally, he probably has enough. That is, he has enough if he *remembers* them. Of facts he should not be expected to remember many; the *significant* facts only are necessary, and it is not to be expected that he know the details. In the *daily* lessons, of course, he is supposed to know many details that he would not be expected to know at the end of the year or a year later. These are more numerous, but the number important enough to be made automatic is relatively small. In short, in history study the pupils should read widely for what they can absorb; should memorize only a few facts, but those few should be remembered well."*

Children need such a knowledge as will make them *intelligent* readers of newspapers and magazines. That is, besides knowing the historical facts indicated, they must, in either history or civics, learn about the three branches of government and what phases of social life each controls or aids. They should know what is meant by acts being "constitutional" or not, and should know where to find out the truth. (See p. 178.)

B.—CIVICS.

The course in Civics parallels that in History, and, in its administration, should scarcely be separated from History, except possibly when its motivation is found in current events not immediately

* In "Teaching the Common Branches."

related to the history-work then in progress. It is also part and parcel of the course in Ethics, and relates closely to the courses in Hygiene, Industry, and Vocational Guidance.

The study of Civics means the study of all things which make for public welfare—such as matters of property, personal and public; health, personal and civic; education of the youth; and laws regarding all community adjustments. As soon as the child is old enough to do so in even the smallest degree, he must be helped to see that the group can attain its highest efficiency only as each individual does his share. This is true in every group, whether it be small or great, a family or a nation. Even the selfish person must see that the group's ability to help its individual members is impaired when even one member does his share badly; hence, for selfish reasons, if for no higher, each must shoulder his own responsibilities.

The subject-matter of the course is not here distributed by grades, since some topics must necessarily appear in several grades, and since other topics so evidently belong to certain stages of development as to be self distributive. (See "Diagram" for suggestions.)

Illustrations of how Civics may be closely interwoven with History: (1) When pupils are studying the period during which our Constitution was adopted, when they are entering dramatically into the debates of those days, they should turn to the Constitution itself, at the back of their histories, and from it find out how the president, how senators, how representatives, are elected; what qualifications are necessary in candidates; how much and by what means these men are paid; what branches of government there are; and so on. Such study makes the Constitution a live instrument, not something that is mouldering in the dust of over a hundred years.

(2) Jefferson's administration makes further study of the Constitution interesting, since the difficulty about Jefferson's election made necessary a change in the Constitution. This is one good time to fix the facts concerning the election of a president. Another good time is during a presidential-election year, when pupils can watch the procedure from January to November.

(3) The method of admitting states to the union is well studied at the admission of Missouri or Texas, or in connection with local state history.

The succeeding outline is for the teacher rather than for pupils.

OUTLINE OF THE COURSE IN CIVICS.

I. Individual life—no civic duties. (When man lived alone, self-preservation was his only guide to action. He could kill what he pleased, eat all he wished, and discard the remainder even though good. He felt no obligation to any other individual, so had no responsibility. How is the baby in the home, today, like early man in this regard?)

II. Family life.

A. The father.

1. What he contributes to the home—materially, socially, spiritually.
2. His rights.
3. His privileges.
4. His obligations in return for these rights and privileges.

B. The mother. (Same outline.)

C. The baby or very little child. (Same outline.)

1. He probably contributes nothing in a material way, but, by being sweet-natured, sunny, and affectionate, can contribute much to the happiness of the home and to each member of the family. Are you the youngest child? What can you do to make others happy? Is there a baby in your home? How can you help to keep it happy and sweet? How will baby's sunniness help mother? Father? Other members of the family?
2. He has the right to eat, sleep, play, grow, and learn.
3. He is protected from danger; cared for when ill; is loved and petted.
4. The baby can feel no obligation; he takes his privileges as a matter of course, and expects what he has no *right* to expect. The child of four or older gradually realizes that in return for these rights and privileges, he must obey his parents and obey cheerfully and promptly. He must look out for his safety when playing, so that his parents need not worry; he can learn to wash his face and hands, brush his teeth and hair, dress himself, and keep himself neat at proper times. He must be kind to his pets, as his parents are to him. He must be courteous to all who enter the home.

D. Other children in the family. (Same outline.)

With increasing years, children can more and more plainly see the need of coöperation in the home and of what they need to contribute. They can see the difference between rights and privileges, so as not to *demand* the latter. To the obligations named under C, above, will be added the assumption of some of the home duties, such as tidying the living-room, caring for baby, or running errands (at mother's convenience, rather than the child's.)

E. The oldest children in the home. (Same outline.)

Contribute to it new ideas and fresh interests, gained at school, perhaps. Often contribute material comforts through their labor. More than in material comforts, however, parents rejoice in the comradeship of their children, and in watching the development of children's character as they apply themselves to school or to their vocations. What new ideas do you carry home? Do you see little ways in which you could make mother's work easier? Is the kitchen designed to save mother unnecessary steps? Does she need a stool or chair for occasional sitting? Is the sink too low, and would a board or stool on which she could set the dish-pan relieve her? Are there any door-knobs or hinges loose that you could screw? Or any screens to mend? Any furniture that you could make in manual training? Any comfort that you could provide father or grandmother by your own effort?

F. Grandparents or aunts and uncles in the home. (Same outline.)

Children should be led to see how their elders worked years before, and so deserve care and respect for past effort just as baby deserves love and care before he puts forth effort. Without preaching, the teacher can help pupils to see how much the general home atmosphere is regulated by the conduct of each member of the family, and especially how children can help make the home a happy one.

In the study of primitive life one sees the gradual increase of group responsibilities and the subordination of individuals in some lines for their greater advantage in others. Through the sacrifice of certain personal conveniences the individual becomes a part of the group, receiving (a) protection, (b) comforts which individually he might not afford in either time, money, or effort, and (c) spiritual uplift, through interchange of ideas and opinions. Each individual has a right to the pursuit of life,—that is, food, shelter, and clothing,—and to the pursuit of happiness,—that is, the realization of his highest ideals; but with this right goes an obligation to others of the group. He must not destroy the property of another in his pursuit of either life or happiness. Primitive man had to learn the difference between "mine" and "thine" and then to respect this difference. He could no longer waste what food he did not wish, but had to cultivate thrift and economy. He had to conserve his sources of food supply, and learn industries which helped him preserve food, dress skins, and protect his home.

Children can apply two primary laws of group-life (the individual's right for self and the individual's obligation to others) to their own activities. For example: Why not play ball near a building? Why not talk when one pleases in church? Why not have dinner just when one is hungry instead of having to be home at the right hour? What gain to the family? What gain to the child? Why not eat fruit, candy, nuts, or pickles, lying open in a grocery? Why think of "safety first" when playing on the street or going to and from school? Why "turn in" all found articles?

III. School-life.

A. The teacher.

1. Rights.
2. Privileges.
3. Obligations and duties.

B. The pupils. (Same outline.)

To recognize that rights always carry with them obligations, and that privileges must not be counted as rights, is a long step on the road to true citizenship. The character qualities begun in the home need to be further developed in school-life where children can be helped to see their duty in regard to yard, building, room, desks, books, learning and reciting of lessons, and in obeying necessary rules for order and quiet. They should realize the values of an education; why their parents and the city and state sacrifice to provide this for children; and hence their obligation to use their time to good advantage. They may see the relation of school laws to laws of games which they play, and how the "game" is spoiled if rules are not followed. "Team-work" in sports is also a fine approach to the problem of group coöperation. (See pp. 295-299, on Discipline.)

IV. Town or City life. Again the topic can be outlined under the heads of the rights, privileges, and obligations, of the different members of the community—the merchants, the doctors, the laborers, the policemen, firemen, etc., but especially of the *children*. What *privileges* are accorded children because of the city's organization? What *rights* have they? What must boys and girls do to deserve these rights and privileges, on the streets, in parks, in the city library, opera-house, or town hall? What can children do to help the city in the way of clean and attractive yards (back and front) clean walks, and clean streets? How can they help in the prevention of unnecessary disease? What are the advantages of quarantine laws? How carefully should these be obeyed? Why are fires so dreaded? What can children do to prevent fires? How can boys and girls make "safety first" mean something?

With the older children, the *city's government* may be studied. What advantages has a commission form of government over a council or other form? What are the duties of the various city departments and officials? How can children make these duties less difficult? Who in the town are leaders for a better—(town)? Are they upheld or are they pooh-poohed? Must a leader be willing to take criticism and perhaps ridicule? When the reform (good roads, good lights, pure water, or riddance of the "smoke nuisance," for example) is accomplished, how do the citizens feel towards the promoter?

V. State and National life. "The gravest danger which confronts America today is American individualism and political indifference. How to make our people nationally self-conscious; how to make 'America First' a significant instead of a meaningless phrase; how to induce our presidents to see beyond their parties, our congressmen beyond their districts, and our citizens beyond their own individual gain; these are the problems to which our most thoughtful men and women are directing their attention."*

Older pupils may well study the rights, privileges, duties, and obligations, of every citizen of the United States, towards:

1. General law.
2. Taxes.
3. Conservation of natural resources—forests, fish, game, water, etc.
4. Government or state inspection of—
 - (a) Foods—meats, milk, eggs, fruit, manufactured foods.
 - (b) Clothing—made in "sweat-shops" under unsanitary conditions and in defiance of labor laws.

* Walter E. Meyer, Kansas State Normal School.

- (c) Fire protection in factories and public buildings.
- (d) Railroads and other corporations.
- (e) Weights and measures.
- (f) Banks and insurance companies.
- 5. Public education—
 - (a) Of the normal child.
 - (b) Of the defective child—physically, morally, or mentally.
- 6. Government projects which further group and individual progress.
 - (a) Fish hatcheries.
 - (b) Irrigation projects.
 - (c) Canal projects.
 - (d) National parks.
 - (e) Cure for tuberculosis and other diseases.
 - (f) Copyrights for authors of books, pictures, and music.
 - (g) Patents for inventors.
 - (h) Military and naval academies.
 - (i) Publications at Washington to help every class of workers to do their work better, and to be more contented and happy in the doing of that work.
- 7. The problem of voting for good measures—system of politics—referendum and recall—methods of electing state officers—United States officers.

Current events of civic importance should be made either the approach to certain special studies, or should apply studies already made. Sufficient time is allowed (see p. 216) under one or another subdivision of "Citizenship" to permit "current events" to have a brief time either daily or weekly in every grade.

The problem method, so thoroughly illustrated under geography, is an especially good one to employ in the teaching of civics. Three sample problems follow: (1) How does a city (Minneapolis, St. Paul, Duluth, or the children's own town) get rid of the snow which falls in the business streets throughout the winter? The answer leads to a study of city cost, city administration, traffic laws, etc. (2) What does it cost to educate me? The answer to this involves a study of how school taxes are levied, collected, and distributed; what officers are necessary; etc. (3) How does it feel to be a member of the United States governing body? This problem may be subdivided into how it feels to be elected or defeated; to be responsible to one's constituents when voting on national questions; to preside over a deliberative body; to be president. These questions can best be answered by pupils' participating in similar activities; that is, by forming a club or society, electing officers who preside and who must learn the rudiments of parliamentary practice, of debate, of administration, etc.*

For the benefit of teachers who have asked for help in organizing and conducting a club, the following suggestions are given:

CONSTITUTION.

ARTICLE I.—NAME.

The name of this organization shall be.....

ARTICLE II.—OBJECT.

The object of this club shall be to improve ourselves, our school, our homes, and our community.

ARTICLE III.—MEMBERSHIP.

Any boy or girl in this district between the ages of 10 and 18 years may become a member of this club by signing the constitution and by paying the required membership fee.

ARTICLE IV.—OFFICERS, AND ELECTIONS.

SECTION 1. The officers shall consist of a president, vice-president, secretary, and treasurer, who shall perform the usual duties of such officers.

SEC. 2. The officers shall be elected by ballot, at the first regular meeting of each school term and shall hold office until their successors have been elected and qualified.

* Excellent work along this line has been done by several of Winona's principals, and by Miss Mabel G. Peirce, of Faribault.

ARTICLE V.—QUORUM.

A quorum of this club shall consist of at least one-third of its members.

ARTICLE VI.—AMENDMENTS.

This constitution may be amended at any regular meeting, by a two-thirds vote of the members present. By-laws may be adopted by a majority vote, at any meeting.

BY-LAWS.

SECTION 1. The club dues shall be.....

SECTION 2. The regular meetings shall be held at the school, the last Friday of each month during the school term, unless otherwise voted.

SECTION 3. This order of business shall be followed at regular club meetings.

- Roll call, by the secretary.
- Reading of minutes of the previous meeting.
- Reports of committees.
- Unfinished business.
- New business.
- Program.
- Adjournment.

The above constitution is in part quoted from one made by Wilson, in "Elements of Farm Practice." If a more elaborate instrument is desired, the constitution of the United States should be used as a model.

PARLIAMENTARY PRACTICE.

For experienced leaders there are several excellent books on this subject, such as Gregg's "Parliamentary Law," or Robert's "Rules of Order"; but, for boys and girls, it is sufficient that they know the following things:

From the time that the meeting is called to order until it is adjourned, business must be conducted in a formal way.

If an individual wishes to speak, he rises, and says, "Mister [or Madame, if a girl] President." The President then says, "Mr. [Brown]," which is the formal way of saying, "You have permission to speak." The speaker then talks, makes a motion, explains a point being misunderstood, etc.

If several persons rise and say, "Mr. President," at about the same time, the president should try to "recognize" (that is, say "Mister ——" to) the one who rose first. As soon as one person is "recognized," the others should sit, and, without any demonstration of annoyance, listen to the speaker "on the floor," and when he sits, rise again, asking for permission to speak. It is usual for the presiding officer to permit every speaker to be heard.

If some *action* is desired, a "motion" should be made. A speaker rises, says "Mr. President," is "recognized," and then says: "I move [or "I move you," or "I make a motion"] that this society change its weekly day of meeting from Friday to Wednesday." He then sits. A second speaker rises, says "Mr. President," is "recognized," and says: "I second the motion," or, "I support the motion." The president then says, "You have heard the motion. Are there any remarks?" Or, so that there may be no error, he may repeat the motion, saying, "It has been moved and seconded that the meeting-day of this society be changed from Friday to Wednesday. Are there any remarks?"

Speaker after speaker may, in turn, after being recognized, make remarks upon the question. The presiding officer tries to be fair to all and to watch the wishes of the society. When, however, there seems no further need of debate or remarks, he says, "Are you ready for the question?" Individuals who so desire answer, "Question!" and the president says, "All those who favor the motion say 'aye.'" He notes the general sentiment. Then he says, "All those who are opposed, say 'no.'" Again he notes the sentiment. If he does not feel sure which side is the stronger, he calls for a rising vote, asking the same questions as above except the words "say aye" and "say no," for which he substitutes "stand." If necessary he appoints one or two members to count those standing at each call.

When he finally knows which side is stronger, he says, "The motion is carried [or lost]," and the secretary so records the decision.

While it is the president's duty to meet the general wishes of the group, individuals cannot always be satisfied; but it is a rule of the game that each member of the society shall respectfully abide by the president's ruling just as in a game the players obey the umpire's decision without question.

After a motion to adjourn has been made, seconded, and carried, and the president says, "This meeting stands adjourned," informal debate on questions of interest may go on, or a social hour may be indulged in; that is, the formality must be observed only during the meeting of the club.

C.—MORAL TRAINING, AND ETHICS.

Since *ethics* is defined as a science, and *morality* as an art, it is plain that it is moral training that should be the main object of the elementary school. Right habits of thought, feeling, and action, should be so well established that they make a firm foundation upon which the individual can, later in life, build the science of ethics. These habits may be *initiated* by precept, by illustration, and by example, but can be *fixed* only by the individual's own conduct. It then becomes the duty of every teacher to see that his pupils conduct themselves according to as high moral standards as they are capable of holding. To "know better" and not to *do* better weakens one's moral fiber. (See p. 295, ff., on Discipline.) Dr. Dewey says, in his "Ethical Principles":

"What the normal child continuously needs is not so much isolated moral lessons instilling in him the importance of truthfulness and honesty, or the beneficent results that follow from some particular act of patriotism, etc. It is the formation of habits of social imagination and conception. I mean by this it is necessary that the child should be forming the habit of interpreting the special incidents that occur and the particular situations that present themselves in terms of the whole social life. The evils of the present industrial and political situation, on the ethical side, are not due so much to actual perverseness on the part of individuals concerned, nor to mere ignorance of what constitutes the ordinary virtues (such as honesty, industry, purity, etc.), as to inability to appreciate the social environment in which we live."

If each individual's highest self-realization is the goal of instruction, there must be, on the teacher's part, conscious effort directed toward the building up of character in pupils, the broadening of personality, and the laying of a philosophical foundation. Each person must be helped to get the deepest possible meanings out of life, to joy in the actual doing of his work as well as in the fruits of that labor, and to use leisure properly for physical, mental, or spiritual re-creation. One must learn from experience to appreciate *service* in whatever form or degree it is rendered, learn how to accept as well as to give favors, and grow to realize that *faith*, in self, in one's fellows, and in the Absolute, is the rock foundation of a perfect life. An individual's spiritual growth is so largely the result of all the influences which go on in his life that parents and teachers need to know the stages of development in moral attitude, and what subject-matter and methods will best satisfy any special need at a given age, as much as they need to know the same things about reading or arithmetic.

In 1908, the National Education Association felt strongly enough upon the subject to warrant a "Declaration of Principles and Aims," in which it says:

“We earnestly recommend to boards of education, principals, and teachers, the continuous training of pupils in morals, and in business and professional ethics, to the end that the coming generation of men of affairs may have a well-developed abhorrence of unfair dealing and discrimination. The daily exemplification in the routine life of the school of the advantage of honest and truthful methods, are commended to the especial attention of teachers as a partial means to this end.”

Methods used in teaching this subject, though varied, may be classified under two main heads; namely, *direct* and *indirect* methods. Space forbids any elaboration of the topic, but at least the relationship between methods can be seen by the following outline:

I. Direct method.

1. At home. 2. On the street or playground.

- B. Club or society work.

1. Forming the club.
2. Getting it into working order.

- a. Making a constitution.
- b. Electing officers.

3. Parliamentary rules practiced in the conduct of the club's business.

1. Meaning of fairness. 2. Qualities of a leader. 3. Team-work in sports.

D. Excursions in geography, nature-study, industry, etc.

1. Courtesy to one another on the trip.

2. Courtesy to the farmer, merchant, or manufacturer, who is host to the class.

3. Thoughtfulness about plants, birds, etc.—not to destroy ruthlessly.

4. Class discussion of conditions noted in a visit to some sanitary grocery, or, perhaps, dairy.

NOTE: Teachers would better teach these ethical lessons through positive rather than negative suggestion, hence should visit only such places as can, in discussion, be favorably criticized. For this there are many reasons—some psychological, some ethical.

E. Coöperative government in the schoolroom.

1. Part pupils can take.
2. Relation to advisers.

3. Right of pupils to take to the teacher problems in ethics hard to solve or to harmonize with popular thought; for example, "giving evidence" as related to "tattling"; problems in politics heard at home or read in the papers. (Needless to say, the teacher must be broad, and especially tactful.)

4. Pupils recognize need of reminders, and so do as the Perth Amboy, New Jersey, pupils did: print little cards or leaflets containing what they wish to stand for.*

F. By conscious attention to the conduct of parents, teachers, etc.

II. Indirect method.†

A. Music—Classic music and what it means. Music used to arouse finer emotions.

B. Pictures.

1. Famous pictures illustrating characteristics desired. Little comment.
2. Many pictures from modern daily life, such as Rev. Milton Fairchild has secured for his lectures.

C. Literature.

1. Fairy tales, for younger pupils, demanding ethical judgments. (Charles McMurry.)
2. Hero tales, for intermediate-grade pupils.
 - a. Many, without comment (as Frederic James Gould suggests).
 - b. Few, with discussion of the ethical problems involved. (Dr. Felix Adler and Dr. John Lovejoy Elliott advocate this plan.) (See also "Cuore," by de Amici.)
 - c. Precept—as in the case of Washington's "Rules of Behavior."
3. Fun—wholesome humor cultivated. (See pp. 26, 51, 52, for example.)
4. Poetry and fiction for older pupils—"The Merchant of Venice," "Julius Cæsar," "Ivanhoe," "Jean Valjean," etc., in the reading or discussion of which children must pass moral judgments.

D. History, civics, industry, physical education, etc.

Each teacher must select the method he can use most effectively with each new moral situation.

GRADES I, II, III.‡

Through a study of the family and the home community, the child recognizes certain responsibilities which he must meet: helpfulness in the home, cleanliness, obedience, truthfulness, and care of property, for example.

Even third-grade pupils may learn that they have obligations:

(1) To themselves: (a) To keep well and hence to keep teeth, hands, face, clothing, handkerchiefs, pencils, and books clean. (b) To have fun, but to think of "safety-first." (c) To keep eyes and ears open so as to learn all that is possible and not be a "stupid."

(2) To their parents and companions: (a) Children may help their parents by taking care of themselves, by being prompt and obedient, by faithfully performing helpful services, and by being good-natured. (b) They can help their playmates by sharing pleasures with them, by participating in games in any needed capacity—not always wanting to be the leader,—and by showing

* A few statements are quoted from the New Jersey *Educational Bulletin*:

1. To be polite is to have a kind regard for the feelings and rights of others.
2. Be as polite to your parents, brothers, sisters, and schoolmates, as you are to strangers.
3. Look people fairly in the eyes when you speak to them or they speak to you.
4. Do not bluntly contradict anyone.
5. It is not discourteous to refuse to do wrong.
6. Be courteous enough to give others at least half of the way when meeting them on the streets.

† Miss Alice M. Paine, Ethical Culture School, gave valuable help here (and elsewhere).

‡ Several very excellent books containing graded courses in ethics are now available for the teacher. See page 301.

those who need help how to do some bit of work. (c) They should serve others by being thoughtful, kind, and courteous—running on errands for neighbors; saying “Thank you,” “Excuse me,” and “If you please,” at proper times, and by avoiding all rudeness to strangers, such as staring, laughing, or calling out.

(3) To the public or community. Children should be made from the first to feel that public property belongs to all rather than to no one, and hence should be preserved by all, not abused. The town can be improved by children’s care of their own yards, by thoughtfulness in not throwing candy-bags, papers, boxes, fruit-peelings, or broken playthings, about the streets or on other people’s premises. Children can avoid destroying trees, shrubbery, or flowers, in public parks, and can instead plant these, and help to keep the parks tidy and attractive. Many other lines of community effort will suggest themselves to teachers in different localities.

GRADE IV.

As pupils in this grade study the history of tribal life and of tribal leaders, the lesson of *effort in behalf of others*, or the good of each and of all, will be inculcated. Stories of Hebrew, of Viking, and of American Indian life, of our Colonial forefathers, Robinson Crusoe, and the Pioneers of Minnesota, make good studies. Also, a study of the historical development of various industries, and of inventions with their inventors, opens the eyes of children to the heroism of right daily and hourly living. Effort should be expended in helping to make the children’s conduct show growth in truthfulness, generosity of spirit, bravery, fortitude, ingenuity, industry, kindness to animals or to children less strong than themselves, sympathy, patience, self-control; in courtesy to strangers and to the aged; and in general good manners. All these qualities of character are displayed by the heroes of the stories suggested.

Home duties offer further opportunities for the practice of these several virtues.

GRADE V.

The work in history makes fifth-grade pupils feel their debt to past generations, and in particular to local pioneers. Civics points out some of the complex situations in life. Ethics must, therefore, point the need of courage, perseverance, thrift, unselfishness, loyalty, integrity, self-reliance, self-respect, fidelity to a trust, and patriotism.

As soon as children have a fair background of experience, and recognize that in their own environment people set up different standards of conduct for different ages and different abilities, they

begin to set up standards of their own. At almost this same time, daily life seems to conflict with all efforts at heroism. The child feels chained to earth, and needs to learn how great heroes of history *looked*, and *felt*, as well as *acted*, as they went about their ordinary daily duties.

Opportunities to inculcate virtues and to develop a righteous hatred of weakness of character are numerous in the study of the lives of the leaders as well as of the humbler peoples in the nations. To see a nation rise because its citizens were temperate, frugal, just, honest, brave, and loyal; to see a nation remain intact for centuries, increasing its territory and governing wisely because of good laws, industry, and the spread of knowledge and loyalty; to see a nation fall as soon as its people became indolent, seeking individual advantage regardless of the group's good; are burning examples of what to do and what not to do.

GRADE VI.

Legendary stories of the Niebelungen, and of King Arthur and his knights, besides being both history and literature material, are excellent teachers of ethics. The situations are simple, the units relatively small, and the punishment or reward swift and certain, hence both deed and result are sure to be remembered. For example, Brunhilde's good intention did not mitigate her punishment for disobedience; Gareth's reward for bravery, as he overcame the three successive Knights of the Plains, and for self-control, in the face of Lynette's ridicule of him, would encourage any boy to cultivate like adherence to duty in spite of hardships, mistakes, and misrepresentations.

The stories of the crusades, and of the English people's winning of their inalienable rights as men, are lessons in the power of an ideal which children can never forget, if these are first rightly presented. It is needless to say that the teacher should do no moralizing, but should so propose the "problems" as to let the solutions speak for themselves.

The recognition of what each nation contributed to American ideals cannot fail to make for broader sympathy, better coöperation, and greater unity of purpose. (See p. 172.)

The movement at present being instituted in many cities and states to make present-day immigrants feel at home in the land of their choice is worthy the attention of every intermediate- or grammar-grade pupil in the state. Current events, as of the Great War, connect readily with this work and teach American boys and girls something of the real meaning of courage, heroism,

economy, thrift, and cheerfulness, in the face of sorrow, hunger, and suffering.

GRADE VII.

As before, history, civics, industry, and English, open the way to lessons in morals and ethics. The keynote is coöperation.

History shows how the early colonists had to unite against common dangers and hardships, and how they developed governments and necessary laws, as well as obedience to these laws. Individual sacrifices for the common good, justice, faith in one another, loyalty, and patriotism, were virtues which we have inherited from our early ancestors and which we must in honor perpetuate.

A study of home life shows the necessity of coöperation in the home, how parents need and covet the comradeship of their children, and what qualities of character seventh-grade pupils can cultivate; namely, control of temper, being fair to companions and courteous to elders, showing joy in life, hopefulness, ambition, and attention to duty.

GRADE VIII.

Here the correlation between citizenship, science, industry, composition, reading, and arithmetic, is so close as to make the listing of ethical problems almost unnecessary. Only that the teacher may easily recall them are they so listed.

1. Recognition of the sort of nation in which we live—one built on the ideal of individual freedom—the “melting-pot” of so many nationalities as to be in danger of disintegration unless American citizens keep ever before them the principle that *individual freedom is best realized through socialization*, even as highest nationality depends upon the strength of individual citizens.

2. That individuals get most benefit from a group in whose affairs they take active part, hence the duty of voting intelligently, of helping to cure “graft,” and to solve tariff or capital-and-labor problems.

3. To learn how to take defeat. (See page 181.)

4. To know how to act when representing others. (See third problem under eighth-grade Civics, p. 181.)

5. To cultivate the qualities of determination, ambition, imagination, consecration to duty, heroism, and strength of character.

6. The need of choosing a life work because of the impossibility, under present complex conditions, of doing all that one sees to do. (Related to vocational guidance.)

7. The need of understanding others' work, of sympathizing with all who divide among themselves the world's labor, and of *acting for the good of all*.

8. The need of seeing that it isn't what we do but how we do it that gives us the right to a feeling of pride. .

9. The application to our local community of the movement instituted by Detroit and other cities to make the alien, so far from the land of his birth, feel at home in the land of his choice.

The civic pride, the ethical judgments, and the moral growth, that will come to eighth-grade pupils from their attempts to make every foreigner in town love the city, state, and nation, will be well worth the time it takes any teacher to learn what his pupils can do and to be the power behind the scenes to create the right idea of what it really means to be a *citizen* of the United States today instead of a tree-dweller several thousand years ago.

10. The need of boys and girls of this age to be just boys and girls, not little adults; *girls* to dress sensibly, avoiding tight clothing, high-heeled shoes, low-necked dresses, and the use of cosmetics at school; *boys* to refrain from smoking, swearing, idling, and all habits which would cause their mothers shame or heartache.

The appended quotation from *The School Review* for February, 1916, speaks for itself.

SCHOOL CHARACTER-CHART.

Mr. Milton Fairchild, of Washington, D. C., chairman of the Executive Committee of the National Institution for Moral Instruction of Children and Youth, presents to school-men a school character-chart, now in the process of its third revision.

WASHINGTON, D. C., December 17, 1915—*School Character-Chart*—It is believed that schools have produced about as good results as are possible from a curriculum devoted almost exclusively to intellectual education. If more attention to character education should be given, and a better basis in character thus gotten for intellectual development, an improvement in the product of American education could be secured which would be much appreciated by parents and the general public, and a benefit to the nation.

The following statement of the character which should be the result of education has been compiled from advice received from many thoughtful people in various walks of life, and is respectfully submitted for further study and criticism by those interested. Modern life is complicated beyond the possibility of understanding save through collaboration by many individuals who combine their experiences and observations into a broad basis for conclusions. On the level of many minds there is some degree of certitude regarding the wisdom of human experience.

Character is divided into six phases: (1) Intellectual, (2) working, (3) personal, (4) social, (5) emotional, (6) physical. An estimate in detail of a pupil's character can be made by grading each item thus: ("Earnest, 7; trifling, 3 (or 5 and 5, or 2 and 8, according to observation). The totals under each division can be made up, and the general total. A detailed knowledge of the strength and weakness in character of any pupil can be attained, and used as a basis for planning his or her character education. The effectiveness of the general character education given in a school can be estimated by a study of the character development of the pupils in the older classes:

Intellectual Character, needed for wise thinking.

Sincere and open-minded, not diverted by personal interests.
Inventive and constructive, not lacking initiative.
Rational and judicious, not over-emotional, hysterical, nor melancholy.

Earnest, not trifling.
Discerning, not superficial.
Alert, not indolent.
Useful, not merely interesting.
Accurate, not indefinite.

Working Character, needed for doing useful work.

Purposeful, not led merely by likes and dislikes.
Attentive, not heedless.
Persistent, not vacillating.
Decisive, not procrastinating.
Adaptable, not slow to fit into new surroundings.
Developed executive ability, not haphazard.

Teachable, not stubborn.
Ambitious, not self-satisfied.
Energetic, not lazy and dilatory.
Progressive, not opposed to change.
Thrifty, not wasteful.
Artistic, not slovenly.

Personal Character, needed for doing right by one's self.

Thoughtful, not merely impulsive.

Independent, not suggestible.

Self-respecting, not dissipated.

Influenced by high ideals, not content with low standards.

Conscientious, not lawless.

Self-controlled, not weak.

Refined, not coarse.

Social Character, needed for doing right by others.

Honest, not thieving nor disposed to cheat.

Truthful, not given to lying and deceiving.

Disposed to trust others, not suspicious.

Sociable, not exclusive nor snobbish.

Tactful, not brusque nor priggish.

Generous, not stingy nor jealous.

Public-spirited and patriotic, not selfish.

Reverent, not impudent nor flippant.

Genuine, not affected.

Honorable, not sneaking.

Just, not unfair.

Harmonious, not wrangling.

Forgiving, not vindictive.

Loyal, not treacherous.

Pure, not lewd.

Courteous, not rude.

Emotional Character, needed for the joy of living.

Capable of true love, not cold-hearted.

Kindly, not cruel nor hateful.

Responsive to the beautiful, not indifferent.

Devoted to righteousness, not inclined to evil.

Humble, not conceited.

Tolerant and with a sense of humor, not angry

over differences of opinion.

Courageous, not timid.

Sympathetic, not self-centered.

Congenial, not repulsive.

Alive to truth, not uninterested.

Patient, not irritable.

Hopeful, not pessimistic.

Physical Character, needed as a basis for human life.

Well-developed body, not poorly nourished.

High resistance to disease, not susceptible.

Ready muscular control, not bungling.

Grace of figure and carriage, not frumpy.

Vital, not sluggish.

Endurance, not quickly tired.

Strength, without disability.

VI.—FINE ART.

As shown in the outline on page 206, man promotes the growth of a new art—fine art—when in his development, he reaches the point where he seeks expression for his æsthetic emotions. Craving quiet, rest, peace, balance, harmony,—whatever the emotion be named,—man seeks the satisfaction of this longing in the world about him. When he once attains a satisfactory expression of the harmony which he finds in his material, social, and thought worlds, the result is called fine art.

The field of fine art naturally divides into music, drawing, and literature, according as the expression is that of beauty in sound; in line, form, and color; or in human relationships.

Preliminary to the attainment of fine art, the race made numerous motor adjustments bordering on art, and using art materials, yet lacking one or more of the principles necessary to make the result true art.

In a similar way, children of elementary-school age must needs use art materials long before they can produce artistic results. Before school age, as well as in the kindergarten and primary grades, when children make mud pies or clay animals and fruit; use building-blocks of different kinds; scribble; dance and play in rhythmic games; and hear and use language; they are making responses and gaining experiences upon which fine art can later be built.

The function of the school is to guide these responses so that each individual may attain the highest development of which he is capable. The subject-matter of the three divisions of the field

must, like all other subject-matter, be selected and distributed according to definite principles. (See pp. 206-207).

A.—MUSIC.

Music is the result of man's efforts to express instinctive rhythms, emotions, and highest aspirations, through the use of harmonized sounds. Rhythmical body movements such as are found in primitive and folk-dancing, in whistling and singing, and in playing upon instruments invented to fit man's developing tastes, are the present means of expressing this harmony.

Since the human voice is not only the most universal and immediately accessible but also the most wonderful instrument known to musicians, singing will continue to be, as it has long been, the phase of music to be emphasized in our public schools.

Like the other arts, music is based on harmony—harmony between thought and its expression, consistency within any one form of musical expression, and right relations between the phases of the art and the individual's emotional and spiritual development.

Because teachers and parents see year by year new values in the control of this phase of knowledge, the aims of music study have accumulated into a long list. None of the earlier aims can or should be discarded, but the relative values of all must be settled and each given its rightful place as a factor in the final result to be desired. At different times, places, or stages of development, we find music to be: (1) A "pleasing diversion or relaxation;" (2) an expression of an individual's feelings; (3) an appeal to others' feelings; (4) a factor in unifying a group (congregation, mob, or community); (5) a drill in intellectuality (perception and analysis); (6) an appreciation of technique; (7) a moral or ethical uplift; and (8) an expression of highest self-realization, which comes to the artist with creation, or to the layman with interpretative power—one of the rarer delights resulting from long study and effort.

Appreciation and love of good music are within the grasp of all; but, like the love of good literature, they can not be gained by mere knowledge of symbols (words or notes), though such knowledge *may* be made to aid appreciation. If the work on symbols be isolated, as it too often has been, it ends in "mechanical exercises which grow distasteful and almost meaningless." If, on the other hand, children are unguided in their choice of songs or untrained in their use of the voice, the result is seen in crude taste and execrable execution. Later attempts to develop good taste and to arouse the critical faculty only show the child how grotesque

are his own efforts, and end in his abandonment of all attempts at musical expression, and, possibly, even of appreciation.

In common with all teachers, the teacher of music must develop what ability is already within the pupil—must begin on his plane and lift him very gradually to higher planes. Two main lines of effort are necessary: (1) The pupil must have his “range of sound concepts” steadily enlarged, so that he finally makes many and fine discriminations, whereas at first the ordinary child feels few and only coarser differences. (Monotones seem to make no discriminations.) Sense training, much listening, and rote-singing of songs within the pupil’s ken, are some of the means employed by teachers to secure this broader range of sound concepts. (2) The child must have, as in other content subjects, increased and varied experiences of a general nature, as well as in the specific field of music. He must, through doing, get a fundamental background for imaginary situations before the literature of music will appeal.

The following outline is furnished through the courtesy of—

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The attempt has been made to suggest work which can be carried out under existing circumstances by the teachers in the State of Minnesota.

COURSE IN MUSIC FOR GRADES I TO VIII INCLUSIVE.

SYLLABUS.

Rhythm.—Development of the feeling for and ability to express rhythm in bodily movements.

Ear Training.—Appreciation of and discrimination between musical sounds.

Voice Training.—Proper use of the voice, and ability to sing many songs.

Eye Training.—Sight reading.

Harmony.—Singing of part-songs; orchestral ensemble.

Musical Appreciation.—Cultivation of a taste for the best music, by singing good songs and hearing good vocal and instrumental compositions.

OUTLINES.—GRADE I.

Rhythm.—Cultivation of the feeling for rhythm, and ability to interpret it by bodily movements. The phonograph may be used here to advantage; use records of a strong rhythmic character.

Ear Training.—Recognition by children of melodies that have been heard frequently, whether sung by teacher without words, or

played on piano or phonograph. Rote songs may be learned directly from the phonograph record. Phonograph records of many suitable songs for children of this grade are available.

Voice.—Children of this grade who have not the ability to sing simple songs should be given daily individual help. The frequent cause of the monotone is the incorrect use of the voice; if the teacher uses a light quality of voice in illustrating for the children, and leads them to use the head-voice exclusively in singing, practically every child will be able to sing simple songs when he leaves this grade. From twenty-five to forty songs should be learned by the children during the two semesters.

GRADE II.

Rhythm.—Development in the children of the feeling for strong pulsations in music, through listening to vocal and instrumental compositions. Children may indicate the beats of a piece of music by tapping, clapping, marching, swaying or bending of body, etc. The phonograph may be used to advantage. Use records of a strong rhythmic character.

Ear Training.—Recognition by children of melodies that have been heard frequently. Some rote songs may be learned directly from the phonograph records. To cultivate the listening habit, have the children occasionally sing their rote songs with piano accompaniment, or phonograph record.

Tone Relationship.—As an introduction to sight reading, have children learn, by rote, about fifteen simple songs with syllable names.

Sight Reading.—Children should begin to read music in this grade. Use many simple songs in all keys, and in the various meters commonly used, and have children read the songs collectively and individually with syllable names, and later with words.

Musical Appreciation.—The rote songs, songs for sight reading, and music played on piano or phonograph, should in all cases be good, so that a taste for the best will be cultivated in the child.

GRADE III.

Rhythm.—Development in the children of the feeling for strong and weak pulsations in music, through listening to vocal and instrumental compositions. Children may indicate the beats of a piece of music by tapping lightly on desk. The phonograph may be used to advantage; use records of a strong rhythmic character.

Ear Training.—Recognition by children of melodies that have been heard frequently. The listening habit is cultivated by having

the children occasionally sing their rote songs with accompaniment or phonograph record. It is advisable that children hear songs that illustrate the pure, light, sustained tones that children should use exclusively in singing. Many phonograph records are available for this purpose. Teachers should take great care to use only the right quality of voice in teaching the rote songs.

Sight Reading.—Children should read, collectively, and individually, many simple one-part songs, written in all keys and in the various meters in common use. The last half of this year, the songs for sight reading may contain the rhythm commonly known as the “equally-divided beat.”

Musical Appreciation.—The rote songs, songs for sight reading, and music played on piano or phonograph, should in all cases be good, so that a taste for the best will be cultivated in the child. Suggestions are gained for the proper interpretation of songs, through listening to good phonograph records.

GRADE IV.

Rhythm.—Continued development in the children of the feeling for strong and weak pulsations in music, through listening to vocal and instrumental compositions. In the last half of this year, present six-eight measure, as compound double meter—two beats to a measure; it will aid the children in the proper feeling for and interpretation of this rhythm if they listen to rhythmic music written in six-eight measure, such as “Barcarolles,” “Cradle-Songs,” etc.

Ear Training.—Recognition by children of musical compositions that have been heard frequently. Children will be ready, the last half of this year, to read simple two-part songs. As an aid to clear, pure two-part singing, have class listen to duos, both vocal and instrumental; good phonograph records are available for this purpose. Listening to music written in minor keys develops an appreciation of this mode, which is necessary for the proper rendering of songs in the minor mode.

Sight Reading.—Children should read, collectively and individually, many good one-part songs written in all keys, and in the various meters in common use. These songs may contain the rhythms known as “equally-” and “unequally-divided beat,” “beat-and-a-half note,” etc.; and chromatic tones, where the progressions are simple. The last half of the year, simple two-part music may be introduced.

Musical Appreciation.—Only good music should be sung and heard by the children, so that a taste for the best will be cultivated.

Suggestions are gained for the proper interpretation of songs by listening to good phonograph records.

GRADE V.

Ear Training.—As an aid to clear, pure, two-part singing, have class listen to duos, both vocal and instrumental. Good phonograph records are available for this purpose. Children should become familiar with the minor as well as the major mode; frequent listening to music in both modes will result in the desired appreciation.

Sight Reading.—Songs for this grade are in one- and two-part; they may contain chromatic tones, and any rhythm in common use. The voices of the pupils of this grade are in most cases of the same quality and compass, and the alto part in the two-part songs should not be sung exclusively by one division of the class.

Theory.—Through the reading of music in grades two, three, and four, children have gained a knowledge of the staff, note and rest forms and values, and meter signatures. In the fifth grade, children should learn the place on the staff of the key-note, in eleven major keys.

Musical Appreciation.—Recognition by pupils of musical compositions that have been heard frequently. Only good music should be sung and heard by the children, so that a taste for the best will be cultivated. Suggestions are gained for the proper interpretation of songs, by listening to good phonograph records.

GRADE VI.

Ear Training.—Give pupils the opportunity of listening to good part-music. It is advisable in some cases to introduce three-part singing the last half of this year; as a preparation for this work, have pupils listen to simple three-part music, preferably unaccompanied. The phonograph may be used.

Sight Reading.—The course in sight reading for this grade should consist chiefly of good two-part songs. In classes in which there is a sufficient number of alto voices, three-part singing may be introduced the last half of the year.

Voice Testing.—The voices of all pupils in this grade should be tested individually, twice during the school year, and each pupil assigned to the vocal part to which his voice is best suited.

Musical Appreciation.—Recognition by pupils of musical compositions that have been heard frequently. After hearing a composition for the first time, pupils should be able to classify simple musical forms such as march, waltz, minuet, cradle songs, etc. Only good music should be sung and heard by the children, so that

a taste for the best will be cultivated. Suggestions are gained for the proper interpretation of songs by listening to good phonograph records.

GRADES VII AND VIII.

Ear Training.—Listening to the quality or timbre of musical instruments, and making comparisons, is good training for the ear. Some phonograph records reproduce quite satisfactorily the tone quality of orchestral instruments, and could be used for this purpose. As an aid to clear, pure part-singing have pupils listen to trios and quartettes, both vocal and instrumental; phonograph records may be used.

Sight Reading.—The course in sight reading for the seventh grade, and in some cases for the eighth grade, should consist chiefly of good three-part songs. If there is a sufficient number of boys in the school with bass voices, they should unite with the eighth grade, and the eighth-grade class should then study songs in four parts.

Voice Testing.—The voices of all pupils in these grades should be tested twice during the school year, and each pupil assigned to the vocal part to which his voice is best suited.

Theory.—Elementary theory of music should be learned in connection with the actual study of music, and not as a formal study of signs and terms. Through the reading of music, pupils have gained a knowledge of the staff, note and rest forms and values, major, minor, and chromatic scales, and key and meter signatures. Tests covering this theory should be given eighth-grade pupils.

Orchestra.—An orchestra is a valuable asset in a school. Encourage pupils to study musical instruments, and wherever possible organize a grade-school orchestra. In some cities and towns of the United States, class instruction is given pupils in the public schools, in piano, and also violin and other orchestral instruments. Competent teachers of these instruments are provided, and the lessons are given in the school-building, usually outside of school hours, pupils in most cases paying a nominal fee for the lessons. Class instruction gives pupils the opportunity of hearing and seeing others at work, and the results are favorable to the individual.

Musical Appreciation.—Recognition by pupils of musical compositions that have been frequently heard. Children of this grade are interested in overtures and other instrumental compositions, excerpts from operas and oratorios, and the best “art-songs.” It is important that pupils should know the titles and the names of the composers of musical compositions to which they listen.

B.—DRAWING.

Drawing and its related arts, painting, sculpture, and architecture, grew out of man's desire to express in various mediums the beauty he saw or dreamed of in line, in form, and in color.

In lieu of a full discussion of the subject, already so ably treated by Bailey, Sargent, and others, a brief outline of various topics necessary for teachers to consider follows:

I. Development of the various forms of the drawing art.

A. Drawing.

1. Grew from man's desire to communicate and to record experiences, hence the first efforts were to portray an object as it was; that demanded exactness of observation, and *accuracy* of line relationships. Soon, details, differences, and ill-proportioned accuracies, were omitted or idealized, so that *beauty in line* developed.
2. A proper "setting" for an object or a part of an object created perspective; later, laws of *perspective* were worked out.
3. A desire that an object should fit its function caused the laws of *design* to be developed.
4. *Decoration* of loved objects naturally followed.

B. Painting.

1. Developed from attempts to express harmony of color.
 - a. With spectrum colors. b. With light and shade in one tone.
2. Demanded study of space and mass relationships, rather than mere line relationships.
3. Created additional laws of drawing, design, decoration, and perspective. (Composition.)
4. Developed a technique of each medium.
 - a. Water-colors. b. Oils. c. Pastels, etc.

C. Sculpture.

1. Application of principles of drawing, design, and composition, to a new medium—clay, plaster, marble, etc.
2. Study of anatomy, architecture, etc., according to form of sculpture to be used.

D. Architecture.

1. Application of named principles to construction and ornamentation of buildings.

II. Aims of elementary-school instruction in the drawing arts.

A. To make art an aid to the language arts, to nature-study, and to industry especially, but also to other school subjects.

B. To secure steady growth in the child's ability—

1. To illustrate an idea or thought by doing; for example, modeling an apple in clay, cutting a tree from paper, making a pattern for a star, or a box, etc. That is, to *represent*, showing better and better control of the medium and better powers of observation.
2. To make a specific into a general notion; that is, to *conventionalize*.
3. To add to a specific idea; in other words, to *idealize*.
4. To apply principles learned to new situations; that is, to *decorate*, to *design*, and to *compose*.
5. To *appreciate* better art.

As an exceptionally fine teacher* of this subject has said, fine art in the elementary school should be, what it is for the majority of us through life, "the handmaid of other subjects," as well as of our thinking. In adulthood most of us express ourselves, not in *creating* art, but in *selecting* what we "believe to be either useful or beautiful."

III. Materials and mediums to be used.

A. In all grades.

1. Paper—for tearing, folding, cutting, mosaic laying, etc.
2. Pencils and crayons of all kinds. 3. Water-colors and brushes.

* Miss Bertha H. Speckman, Winona.

4. Clay, or some other plastic material such as plasticene, papier mache, or salt and cornstarch paste, if clay is not obtainable.
 5. Beautiful works of art in the original, in lantern slides, or in pictures.
- B. In different grades.

Construction materials to suit ability, skill, and interest of pupils; for example, wood for toys, materials for Christmas gifts or for household and personal conveniences, etc.

While, throughout the elementary school, the real problem for the child is to learn to draw, the materials and mediums selected for practice must ever be the most artistic obtainable. Art materials are not chosen to make the child think that he is creating art, but so that whatever he learns may readily function, later, when he does reach the stage where he can independently create or appreciate fine art. This use of art materials for the child who is learning to draw is analogous to the employment of good literature for the child who is learning to read.

IV. Methods.

Throughout the grades the work in fine art should parallel the children's mental and emotional development, being used largely as a means of self-expression but also of reaching towards highest self-realization. Adult standards *forced* upon the child kill spontaneity, interest, and growth, produce fear of self-expression (self-consciousness), and result in formal, imitative work of no value.

Beginning with the child's early desire for decorating objects, and of coloring things, the teacher may lead him—

1. To design decorations that harmonize with the object and its function.
2. To select something appropriate and beautiful in the material world about him as the core of that design.
3. To study that object through representing it in different mediums (paper tearing or cutting, stick laying, clay modeling, crayons, etc.)
4. To conventionalize the idea gained from the object.
5. To apply the design properly.
6. To develop taste, appreciating (a) nature in its varied expressions, as well as (b) the ability of great artists to help others see beauties in life about them.

As in other subjects, *power* is gained by several methods—trial and success; imitation; awakening intelligence, imagination, and emotions; study of technique; and trying to express the ideal in mind at the time. The teacher's function is to lift the pupil to a higher plane as soon as he is ready for it, but not before.

The different mediums employed are found to be valuable in all grades, the only difference being the natural development that comes with maturity—greater skill in handling the materials, better taste, richer experiences, more complex ideas, and surer grasp of principles. *Results* should be much less thought of than *process*, and an exhibit of work which shows how pupils *grew* in thinking power, in appreciation, in invention, in taste, is of much greater value than one which shows results (especially if adults have "doctored" up those results).

V. General results to expect.

In first grade: (a) Pure love of using the mediums. (Mixing colors, daubing, molding clay, for example.) (b) Rhythm, even when not present in the object represented. (A six-year-old, for illustration, will cut a symmetrical tree while looking at one with branches on just one side.) (c) Uncontrolled lines. (d) Vivid color combinations. (e) Attempts at communication of ideas.

In second grade: Not noticeably different from first-grade work, except with individuals and in muscular coordination so that results *look* better. Children are satisfied with the result if they feel they have worked.

In third grade: The use of materials is undertaken with more purpose (not just daubing). There awakes a more conscious desire to know "how to do it," hence pupils imitate the process of the teacher or others, observe the object to be portrayed more closely, represent ideas more accurately than before, and check results by comparison of their work with that of others, thus setting up crude standards of judgment.

In fourth grade: Pupils begin to see the relative values of parts, and so no longer, for example, make buttons the most prominent part of the picture of a shoe, but, under even slight guidance, learn to subordinate de-

tails to central ideas, and to judge worths by applying only one or two standards at a time. For example, this picture is good for its color (let other things go); this, for its movement; this, for its spacing; this, for its neatness and good lines; etc.

In fifth and sixth grades: The children's power to select a central idea and then consistently to work out details to fit it, that is, *to organize*, shows in whatever problem is undertaken. If the pupils are to entertain other grades, the costumes, room decorations, color scheme, must all *fit* the central idea. A school magazine must have a cover to suit the season, the contents, or the purpose of the "publication." Pains-taking work is comparatively easy to secure if the need of such work is felt to be consistent with the central plan.

In seventh and eighth grades: The same organization of details about a central idea may be expected, but the "problems" should be more like *adult* problems, challenging the awakening "grown-up-ness" of the students. Finer accuracy, better judgment of values, and greater personal responsibility for the doing well of all assigned work, should be demanded. Community effort should be common, while individual tastes and interests should at the same time be encouraged. The correlation of fine art with industry, nature study, literature, and language, gives a wide selection of "problems."

The note-book work of upper-grade pupils gives them many opportunities for learning good methods of collecting and arranging material so as to illustrate given subjects, and for using design in decoration.

C.—LITERATURE.

Literature is the result of a universal desire, satisfied by the genius of a few, to harmonize cause and effect in social relationships. In true literature given causes can produce but one effect; wrong is punished and right rewarded. True, the punishment or the reward may appear in new form to us; but the truth remains.

Real literature is tested primarily by the universality of its content—does it contain an abiding truth felt by all ages in all climes? As we go about our daily tasks we are too close to ourselves and to our neighbors always to appreciate the larger truths of life; but when we observe the inner and detailed relationships among several persons during years, as we do in reading "Dombey and Son," for example, we have time to note the universal truths that send us back to daily work with greater faith in the justice of life, with renewed courage to live our best, and with greater tolerance for the frailties of others.

Other tests for good literature also have "harmony" for the keynote: we expect the expression to correspond to the thought; we want the vocabulary as well as the ideas to satisfy our ideals, to enlarge our vision, or to play upon our imagination; we want to be stirred by the proper emotions as we progress in our interpretation of character, and should feel decidedly tricked had Dickens made John Carker's career end other than it did.

Because, then, literature deals with universal types of truth, put into beautiful or consistent form, and because we can there see ideal

social relationships by which to guide our own conduct, it is desirable that all learn to read, to understand, and thoroughly to love literature; and that this may be accomplished, children of all ages should be surrounded by good literature.

In school this is best accomplished by using literature as the subject-matter of language and reading, so that the pupils' acquired "love of reading" or "the reading habit" invariably means a love of *literature*. Or, used as supplementary material, literature may, in youth, clinch a nature-study lesson, and then be recalled in adulthood as a bit of real philosophy. Industry, geography, and history, are dignified, enriched, or vivified, by means of related literature, while the other *arts*, drawing and music, are inextricably bound up with it. In other words, while literature, like drawing and music, has a content of its own, it yet makes a superior handmaid to other subjects.

Classic stories, fairy tales, myths, legends, hero tales, and poetry, should in all grades be heard, read, reproduced, copied, committed to memory, or imitated in writing, for by these means pupils grow accustomed to the vocabulary of the best literature, have as background the knowledge which leads to an appreciation of metaphor and allusion, and acquire the habit of sustained thinking, of seeing images clearly, and of judging worths.

For suggestions concerning literature to be used in different grades, consult (1) the courses in Language and Reading, (2) pp. 301-302, and (3) The Minnesota School Library List, which is a rich mine in itself.

SUMMARY OF SUGGESTIONS—TAKEN FROM THE "DIAGRAM."

GRADE I. *Rhythmic tales*, cumulative tales, rhymes, and fairy tales.—*p. 16.*

GRADE II. Same as first grade plus *Nature myths*, some Greek and Norse myths. *Poems of childhood* (Field, Riley, R. L. Stevenson, etc.)—*p. 19.*

GRADE III. *Humor*—Uncle Remus, Just So Stories, Letters from a Cat, Pinocchio, Merry Animal Tales. *Imagery*, color-tone, long words, etc. *True stories*—Tree Dwellers, etc. Indian Life, Colonial Days, Viking Tales, Robinson Crusoe, Seven Little Sisters, etc.—*pp. 25, 82.*

GRADE IV. *Recognition and respect for law and courage*. Same as above plus Robin Hood, William Tell, historical tales, biography, lives of great Americans, etc. *Jungle Books*. *Humor of finer kind*.—*pp. 30, 86.*

GRADE V. *Vaguely appreciating bigness of world, and of life*—hence, stories of adventure and biography—Arthurian legends, Ulysses, Beowulf, Roland, Perseus, historical characters everywhere. *Gold Bug*, *Treasure Island*, books by Seton-Thompson. *Poetry*.

GRADE VI. *Similar to fifth*. *Poetry*: Ballads, Canterbury Tales, Iliad, Odyssey, William Tell, Lays of Ancient Rome. *Stories of foreign lands and of children away from home*—Hans Brinker, Arthur Bonnicastle, Tom Brown's School Days, Little Men, etc.—*pp. 43, 92.*

GRADE VII. *Great individual differences*, hence wide range necessary. *Stories of individual success and courage*. *Biographies*, Writings of Cooper, Scott, Lamb, Hugo, Dickens, Ruskin, Plutarch, Prescott, Thackeray, Tennyson, Warner, Irving, Alcott, etc.—*p. 50.*

GRADE VIII. *More of one line of reading*. *Literature about great men, great industries, great enterprises*, etc. Same authors as seventh plus Shakespeare, Eliot, Hawthorne, Hale, Graham, Holmes, Bangs, Webster, Vandyke. *Current literary magazines*.—*pp. 53, 96.*

PART II.

MANUAL FOR TEACHERS

A.—HIGHEST SELF-REALIZATION AS THE AIM OF EDUCATION, THE BASIS FOR THIS COURSE OF STUDY.

This Course of Study elaborates as the aim of education the highest self-realization of the individual, through his active adjustment* to the three phases of his life: physical, social, and spiritual.

Since life demands constant adjustment as a means of growth,—since, today, like Alice in Looking-glass Land, one has to run barely to keep his place in the world,—education, as one phase of life, furthers the individual's power (1) consciously to select the best adjustments to make for his development, and (2) purposely to employ the best means of making the selected adjustments.

Since the best means can never be employed unless the end is known, education is forced to name its own goal, as well as to select the materials for and methods of attaining that goal. The goal, however, like the end of the rainbow, or the distant mountain, recedes with the seeker's advance. Because some grow weary, and, losing sight of the distant end, make an end of the means; because others go on to the end, there to find richer returns than can be measured by the fabled pot of gold; and because many, in between, find the means as end too narrow, and yet miss high spiritual values on account of limited interpretative power; the aim (or goal, or end) of education has come to be stated in a myriad of ways. Of all these, self-realization, *obtained through subordination as well as elevation of the individual in the process of his socialization*, seems the goal best suited to modern American thought, even as it was to Grecian when Athens ruled the world.

Self-realization is best attained by living a nobly purposeful life; but, since all adults of the community want the youth of the race to come to their own more quickly and more certainly than they can if left to the chance teachings of life, the specialized phase of life (or of education) called "schooling" must choose a road to the final end, along which are set up transitory goals able to be striven for by the young. To do this, those interested in the processes of education (parents, teachers, and all adults of the community) must discover (1) what goal men seek through the adjustments they make both for their own development and that of the group in which they live; (2) which phases of these types of adjust-

* Carver distinguishes between the passive adjustment made by animals and the active adjustment made by men in "Sociology and Social Progress," p. 9.

ment miss being taught in the general life of the child (so that the specialized organ of education—the school—may know how properly to supplement what is learned outside of school); and (3) how these adjustments are made (so that the school may employ proper methods). In other words, the school must look to the activities in human life—physical, social, and spiritual—to discover (1) its aims, (2) its materials, and (3) its methods.

(1) No matter how aims in education may be subdivided to meet the exigencies of the week, day, or half-hour, they must ever point towards the eternal values of Truth, Morality, Beauty, and Holiness—those aims which govern human adjustments in the aggregate.

(2) No matter into how small bits the subject-matter needs to be made, to fit the various considerations necessary in its selection and distribution, it must of necessity be chosen from the materials men use in furthering life aims.

(3) No matter what methods are employed, they will assuredly be those methods which the human race has worked out to meet changing needs; hence the teacher, in his conscious systematization of work, the only economical means of securing efficiency, must study the different methods open to selection, the principles underlying these different methods, and the relative values of devices in furthering the method selected, so that method and device may be judiciously selected and then used only so long as valuable. (See pp. 279–283.)

Because *the aim of life is the fullest possible realization of the divine self* in the individual, the materials and methods for furthering the aim must be found in a careful analysis of the adjustments made by man to attain his birthright.

B.—AN ANALYSIS OF HUMAN ADJUSTMENTS.*

As implied before, self-realization is not self-seeking; it is a result to be obtained by serving, not by being served.

Between the best good of the individual and the best good of his fellows there is no conflict; one man's best good is in perfect harmony with the good of all mankind. One has not attained perfect self-realization until he has so lived that the maxim of his every act is fit to become a universal law†; but as he approaches this perfection, this self-realization, he takes more and more cognizance of his fellows and of his physical environment. Genius-like, he marvels at the commonplace, seeing in each stone and leaf and butterfly the mystery of all life.

An analysis of human adjustments leads one to the century-old truth that all begins in unity and ends in unity; that phases of life are temporarily segregated for convenience, but that all can be seen in each whenever studied. Birth starts all the later differentiated phases of adjustment which in highest self-realization again unite. In modern civilization, a child is born into the unit

* For the impetus to this analysis, the author is indebted to the work of the Superintendents' and Principals' Association of Northern Illinois.

† Kant's Categorical Imperative.

of social life, the family, and so his social adjustments begin almost at once. Very soon he consciously notes his social surroundings, and also reaches out in an attempt to control material things and to understand some of the immaterial or abstract situations about him. The accompanying diagram is an attempt to represent the idea that all adjustments grow out of life itself, separate into three main types lying in the same plane, at equal distances one from another, yet always interrelated; and end in man's highest self-realization, or freed personality.

1. Life, the unit out of which all differentiated experience grows.

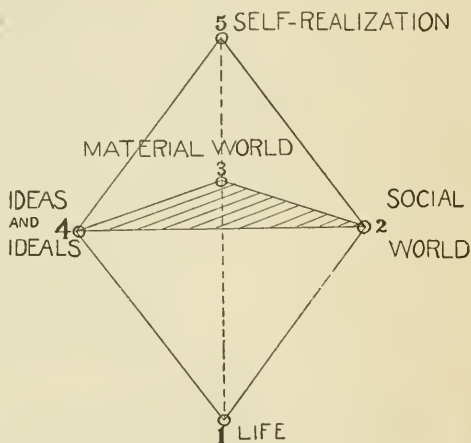
2-3-4. The plane in which human experiences differentiate because of adjustments to different "worlds."

2. The social world.

3. The material world.

4. The immaterial world, or world of ideas and of ideals.

5. Self-realization in the highest sense—that unity which comes *after* differentiation.



ORIGIN OF ELEMENTARY-SCHOOL SUBJECT-MATTER IN RELATION TO HUMAN ADJUSTMENTS.

NOTE: Italics in this outline indicate the commonly known school subjects as they inevitably grow out of various human adjustments.

I. Adjustments to the social world.

A. In family life.

1. Communication necessary—

- a. Understanding others. (Voice, gesture, words.)
(Through the senses; hence, "*sense training*.")
- b. Expressing self; (voice, gesture, words;) hence,
language developed. (See pp. 228-230.)

2. Family privileges shared; hence, conventional *good manners* developed. Also, *morals* and *hygiene*.

3. Family labors shared; hence, simple home *industries* learned.

B. In the larger group—clan, tribe, town, state, world.

1. Coöperation necessary—

- a. For protection—hence, *discipline* or government upbuilt—town moots; building laws, fire and police departments, etc., made.
- b. For economy of (1) time, (2) energy, (3) money—hence, *civic* and *economic laws*, taxation, etc., developed.

- c. For interchange of ideas.
 - (1) In conventions—speech refined, travel necessary.
 - (2) In print—*reading* necessary; hence, books, magazines, newspapers; hence, libraries.
 - (3) In studying social and economic conditions of other peoples in other lands and times; hence, *history* and *sociology*.
- d. For spiritual uplift—logical, ethical, and æsthetic values prominent in working out this—*knowledge, ethics, æsthetics, religion*.
- 2. Division of labor.
 - a. Inventions made labor lighter.
 - b. Differentiated industries developed.
 - (1) Labor-*vs.*-capital problems.
 - (2) Child-labor problems.
 - (3) More inventions made in every field.
 - c. Exchange of excess products of labor.
 - (1) Barter, exchange, merchantry, commerce—as business methods of conducting these forms of trade changed, various phases of *arithmetic* developed. (See p. 261.)
 - d. Transportation facilities increased—(*geography* developed.)

II. Adjustments to the material world.

- A. In *play, manipulation of objects*, destruction, etc., asking “What?” “Why?” “Wherefore?” etc.
- B. By discovery, exploration, and trial, man finds *nature* supplying his simple wants.
 - 1. Food.
 - a. Native nuts, grains, berries, vegetables, wild animals, etc.
 - b. Cultivated grains, fruit, etc. Stock and poultry raised for meat, milk, eggs, etc.
 - c. Activities: hunting, fishing, herding, agriculture, stock-raising, dairying.
 - 2. Shelter.
 - a. Natural—caves, treetops, etc.
 - b. Slightly transformed—skin and bark huts, log and stone houses, tents, etc.
 - c. Activities: hunting, lumbering, quarrying, mining.
 - d. Results—Family life.
 - 3. Clothing.
 - a. Vegetable products, skins, etc.
 - b. Activities: hunting, dressing skins, simple weaving, etc.
- C. By *manipulation, and invention or construction*, man changes the forms of nature’s supplies.
 - 1. Food—Illustrations follow:
 - a. Flour, puffed grains, etc., prepared.
 - b. Beverages prepared from beans, leaves, berries.

- c. Minerals refined; soda, salt, water.
 - d. *Cookery* refined into an art; *sanitation*.
 - e. Animal foods preserved in many ways.
 - f. Better and different plant and animal forms developed; *horticulture* and *animal husbandry*.
- 2. Shelter—Illustrations:
 - a. Iron changed to steel for strength and durability.
 - b. Lumber used for veneers and other fine purposes.
 - c. Stone crushed and made into concrete, false marble, etc.
- 3. Clothing.
 - a. Cloth manufacture.
 - (1) wool, (2) cotton, (3) linen, including all the processes necessary. *Hygiene*.
 - b. *Sewing*, designing; and all the arts of *garment making* and, manufacture.
- D. By organizing facts and laws or principles found in the simple processes above, man has developed:
 - 1. *Great industries*.
 - a. Agricultural industries.
 - b. Mining industries.
 - c. Manufacturing industries.
 - d. Commercial industries.
 - 2. *Sciences*.
 - a. Geography, geology, astronomy, etc.
 - b. Botany, and related sciences.
 - c. Zoölogy, physiology, and related sciences.
 - d. Physics, chemistry, etc.
 - e. Grammar, philology, etc.
 - f. Mathematics.

III. Adjustments to the immaterial world.

- A. By attempting to explain the mysteries of nature, man developed—
 - 1. Power of thinking.
 - 2. Power of imagination.
 - 3. Mythology.
- B. By attempting to explain man's place in nature, man developed—
 - 1. Standards of appreciation and evaluation—
 - a. Of things.
 - b. Of relationships.
 - (1) Relative values.
 - (2) Eternal values—truth, goodness, beauty, holiness.
- C. By seeing man's relation to his fellow man, the race has developed *history*, *economics*, and *sociology*—
 - 1. The family protection of the child for a longer and longer period of infancy.
 - 2. The desire that the youth of the race shall be taught what will quickly make them better individuals and members of society.

3. The desire to better all mankind—
 - a. Socially.
 - b. Individually.
 - c. Economically.
 } Hence a study of *citizenship*.
4. The feeling of brotherhood of all mankind (*sociology*).
 - a. Sympathy.
 - b. Coöperation.
 } United on one task, although the labor is divided.
- D. By trying to express the harmony in ideal social and material relationships, *fine art* is developed—
 1. Drawing, painting, sculpture, architecture, etc.
 2. Music.
 3. Literature (including the drama).
- E. By attempting to solve the problem of man's ultimate destiny, men have evolved—
 1. Philosophies of life.
 - a. Meaning of duty.
 - b. Use of leisure.
 - c. Self-realization.
 - d. Materialism—pragmatism.
 - e. Idealism, etc.
 } Hence, *ethics* or *morals*.
 2. Religion.
 - a. Faith the keynote.
 - b. Forms numerous.

POINTS TO BE CONSIDERED IN THE SELECTION AND DISTRIBUTION OF ELEMENTARY-SCHOOL SUBJECT-MATTER.

The preceding analysis shows the origin, through adjustment, of every subject in the course of study. Which of these are best fitted for use in mass-instruction, which need developing and refining to meet special needs of a given community, and which must be subordinated to others to secure highest self-realization through socialization, remains a problem for each locality to solve.

The general principles are few; namely:

1. *The subject-matter must further one or more of the eternal values*, which are only larger names for the more commonly quoted fundamentals of character: knowledge, accuracy, persistence, honesty, obedience to law, economy, providence or foresight, generosity, thoughtfulness of others, sympathy, faith, appreciation of beauty, ability to stand alone in times of stress, and the will to do the chosen or the allotted task. Said differently, the material chosen must perpetuate and further the experiences which the race has found, is finding, and will find, valuable for its best development.

That special subjects within a field should be emphasized is not so vital as that all fields should, for the sake of the final goal, be given their proportion of attention.

The school subjects growing out of and fostering social adjustments are English and Mathematics; those growing largely out of material adjustments are Science and Industry; those growing mainly out of ideal adjustments are Citizenship and Fine Art. The unity of the three worlds, lying in one plane, interrelated with

one another, and all growing equally from life and ending in self-realization, must be constantly kept in mind by the teacher, so that, for example, when he teaches geography he will see in it social and spiritual relationships, just as when he teaches reading there will be physical and ideal adjustments as well as social. The youth who wants to try every diverging path along the main road must be held to knowing on what road he is, or he soon becomes lost in a bog of indecision, in a maze of insurmountable complexity; he gets only isolated bits, and, worse still, these seem to disagree, and he may be led so far from the original road as never to get back even in adulthood, when he longs to do so.

2. *The subject-matter must be selected and distributed to fit the pupils to be instructed*, planned in a broad way to fit the psychological stages of developing childhood. The too-early forcing of adult standards upon children, or the holding of pupils too long on a plane lower than they are qualified to reach, are equally restricting to progress towards highest self-realization.

3. *The subject-matter and methods of work must be chosen to utilize the means at hand:*

a. The materials chosen must be such as are available in a locality: Problems about industries, if industrial plants can be visited; study of farming, if farm operations can be observed; nature study of park trees and house-plants, if city children have never had a glimpse of real country; and "safety-first" cautions to children who are exposed to undue dangers in going to and from school.

b. The subject-matter must fit the conditions provided for instruction: A three-hour or a six-hour day, a six-months' or a nine-months' school, few or many supplementary books, poorly or well-equipped school-buildings with small or crowded classes.

c. The subject-matter must be chosen to fit the special ability of the teacher (assuredly his *general* ability for the profession of teaching must be above question): Whether he has particular artistic ability, or little; whether he can best secure accuracy, persistence, and independence, from history, mathematics, or geography. See discussion under 1 above.

I.—SUGGESTIONS TO TEACHERS.

A.—THIS COURSE OF STUDY FOR ALL TEACHERS.

The majority of state courses of study have been avowedly prepared for "rural" or "district" teachers, and even more specifically for inexperienced rural teachers, so that one has grown to expect a state course of study to be useful only in country schools; but the Minnesota course of study has been prepared with the hope of serving *all* teachers.

There is no question that rural teachers should have had first consideration. Isolated as they once were, missing the incentive of daily companionship and the incidental suggestions arising from that companionship, receiving infrequent and often short visits from supervisory officers, rural teachers lacked standards by which to judge the efficiency of their work, and consequently each rural school became an individual unit—good or poor according to the individual teacher.

State Superintendents were wise in bending their earliest energies to standardizing the work of these isolated schools, and in making so nearly uniform a course of study as to better all schools. Minnesotans have reason to be proud that their state leads in making rural schools as good as town schools. Through state inspectors; through better-planned county supervision, institutes, and conventions; through high-school training departments, with a famous leader in rural education at their head; through the Agricultural College and normal schools; and through other agencies; rural teachers in Minnesota are today receiving as much help as do the majority of urban teachers, excluding, of course those in our very largest cities. It therefore seemed only fair that a state course of study issued during this current period of progress, should help *all* teachers of the state and not just one class.

According to length of service, there are three general classes of good teachers (the bad are not considered, since they are soon eliminated by interested school boards):

The first class consists of beginning teachers, whether rural or urban, who are concerned most with *just how to go about this new work* and who are naturally, and hence properly, open-eyed mainly to catchy devices or "tricks of the trade."

Any one who visits a great number of schools and stays long enough to discover the real attitude of teachers to their problem, is invariably impressed with their evident consecration of self to a great work. So few teachers are dishonest, hypocritical, selfish, or given to mere eye-service, that one who *is*, is at once called unnatural. For the untrained teacher who approaches his work with a real desire to do his best for the children, this course of study provides specific help in the way of distributed subject-matter, suggestive lesson plans for the various types of teaching, and definite devices for seat-work, drill lessons, and general management.

The second class consists of teachers of from two to four years' experience, who have satisfactorily learned the external details of school-room management, and who now crave something more fundamental.

Such teachers are recommended to begin reorganizing the subject-matter being taught, for, in making this reorganization, teachers see relationships between topics and subjects that, when pointed out to pupils, arouse more enthusiasm for study than did any extraneous devices ever employed. One subject a year, or, at most, two, will be all a teacher can do well while keeping up the necessary work in other branches. The selection of a topic on which to begin broad study must depend on the teacher's interests or feeling of need, or upon what the school most requires. If no one in the building, or in a particular grade, is an authority on geography, history, composition, vocational guidance, moral training, or any one subject, the teacher will do well to become such an authority. It is hoped that such teachers will find help in at least three places in this Manual, namely: (1) In the basis for the course; (2) in the specific introduction to each school subject; and (3) in several sections of this second half of the book (the Manual).

The third group consists of teachers of wider experience who begin to think more of individual pupils than of either device or organization of subject-matter. Such teachers want to know the whole field of methods so that they may wisely select the best method for each child. Psychology and pedagogy are their aids. Devices will still be used, as they should be, and subject-matter is important, but both become temporary means to an end, and are given their correct evaluation.

There is an old legend of how different birds learned to build their nests. It tells how, while the dove was teaching the art to all, one bird after the other flew off at a different stage of the process, thinking that she knew all about nest building. Only the few who had the patience or insight to remain for the last step became fine builders. Many teachers leave their profession having seen only its earlier stages; the efficient, experienced teacher, who stays to take the last step, wants to get the relation of the field of education to all of life, to see how the specialized organ of education—school—ever grew up, what its original function was, what changes in social conditions have affected that primary function, and whether schools are today meeting their responsibilities. That is, the teacher who has reached this stage of professional growth is getting at fundamental principles of life, is forming a philosophy of education that pushes methods, as well as devices and subject-matter, back to a position of means to an end. Such teachers will study the world's great books, and the world's great teachers in every walk of life as well as in the school-room. They will read and reread this entire course of study, exercising initiative, supplementing the thought, and suggesting changes that will better it.

This course of study was intentionally made to be *studied*. Were it easy enough to permit of being read by him who runs, teachers could not turn to it year after year, as they must, with any degree of interest. It was meant to foster—not kill—initiative, and each succeeding year the course should be less mechanically followed by every teacher who uses it. It must be adapted in every community to local needs and conditions. Superintendent Schulz and the educational leaders who assist him will be ever ready to offer advice on adaptations of the course of study to individual situations. They will also welcome questions and criticisms of every sort.

B.—SUGGESTIONS TO SPECIAL GROUPS OF TEACHERS.

1.—TO BEGINNERS.

Inexperienced teachers want to know "everything," but a study of their inquiries proves that they want most to know what can be done to prepare for the first week, and especially what to do the first day of school.

As soon as possible the teacher should learn all he can about the school and the community; how he is likely to be situated if boarding, and everything which will help him to know what to carry with him. He should study this course of study, and if obtainable, read the text-books to be used, planning general assignments of lessons so as to know what materials to provide. A quantity of seat-work must be made if the teaching is to be done in lower grades or in a rural school, and a note-book of general assignments if in upper grades. The former should all be put into plainly labeled boxes or envelopes, so as to be economically handled. (See pp. 283-292.)

The prospective teacher should make pencil-cases and fill with at least two dozen sharpened pencils; make (or buy) a pocket-like seating-chart,* and have two or three sets of cards ready to use in it. Having a large number of cards to fit the seating-chart pockets, the teacher can, on the first day of school, have each child who is old enough to do so write his name on two of them—one to be put into a pocket corresponding to his seat and the other to lie on his desk. The child's name and face can thus be associated, whether the teacher is at his desk or walking about the room. For the children too young to write, the teacher

* Called the "Dorothy" seating-plan in the Thomas Charles catalog.

must make the cards. This seating chart will last all year, cards being easily shifted as children's seats are changed.

The teacher should plan a temporary program for the first day and then see that there is some definite work to be done by each division that will need to study; learn to tell several stories well, and make a specialty of at least one—his best—telling it almost daily all summer, until he feels that he can tell it in his sleep; know well several songs suited to the pupils to be taught and be able to teach them by rote; collect good pictures, mounting some that will need to be handled often, and label the envelopes in which are pictures for "geography," "history," "language," "Thanksgiving Day," etc.

The teacher must have at tongue's end a number of easily explained and easily played games, some suitable for the playground and some for the schoolroom. He should also have one or more good books from which to begin to read, reading perhaps the last ten minutes so that pupils look forward to the next day's school. (See list of "Books to Read Aloud," by Miss Wilson, Department of Education.)

If not already known, the teacher must find out how to keep the school records, how to find average daily attendance as well as other averages required in the reports to City or County Superintendent.

All the above things can be prepared long before school opens. There still remains the need of going to the school itself long enough before the first day to be sure that everything within the teacher's province to control will be in order, and to secure from the clerk of the district school or from the city principal, the classification, attendance, and library registers left by the last teacher. In case the last teacher, *whose duty it was to do so*, has not left things in perfect order the new teacher should put into clean boxes, well arranged and labeled, all supplies and materials worth using. Books should be dusted, and mended if worth mending, before being recorded; or, if past mending, discarded. Maps should be examined, mended if necessary, and checked to see whether all that will be needed are available. If new window shades, fresh calsomining, scrubbing, replaced window panes, or other repairs, are needed, or if the school is a primary school and has not the full set of supplies required by law, the teacher should courteously ask whether they may be bought or attended to at once. If the teacher shows a pride in the appearance of the school, he will usually be met more than half way by the principal, superintendent, or directors.

On the Saturday before school opens, if not before, cupboards and the teacher's desk should be cleaned out, fresh papers put in the drawers and on shelves, and materials needed for the first day put into accessible places. The temporary program should be written on the blackboard, or on a large card to be hung up. Words to a song and some assignments can be written on the blackboard, and the room can be given an air of "ready for work," of neatness and cheerfulness. In the afternoon, the teachers should "settle" himself in his home for the year, putting things in such order that Monday night can be spent on school work without interruption. Sunday, at church, the teacher is likely to meet some of his pupils or their parents, and can make a good start by being "friendly" yet dignified.

On the first day the teacher will do well to see that no time is *wasted*, though some must necessarily be taken for getting pupils' names, passing supplies, etc. The law demands an accurate account of attendance, so, before noon, the teacher must have a complete list of names; but it is not necessary to take an hour to get this. Before nine o'clock, the teacher, having gone early to school that day, may have learned several names and have them put into the seating-chart. Others can be obtained gradually, as different classes are called or seat-work is inspected.

If pupils are old enough to do so, they may write their own names on the seating-cards. Within a few days the teacher may secure all other information required for reports, such as children's ages, nationality, physical condition, etc. The alphabetically arranged names should not be written in the register for about a week, to make sure there will be no more changes.

If the school furnishes books, writing materials, etc., the teacher need not have all passed at once, but may well spend two or three days in their gradual distribution, *as needed*. Immediately after a brief and dignified opening exercise, at which time a "speech" from the teacher is not at all essential, each class may be given something very definite to do. (See pp. 283-292.) A small group may be tested in some subject and then set a task to do, while another group is tested. If the school consists of but a single grade, all may recite and then study, the teacher thus having an opportunity to show pupils how he wants work done, and to learn how independent and capable the pupils are.

After a vacation of unrestricted movement, younger pupils may find long sitting tiresome. It is therefore wise to see that children's positions are frequently changed—by passing to blackboard or to recitation-benches, by standing for some short recitation, by marching for two minutes, or playing some game like "stage coach" or "fruit basket," or by standing to sing.

The teacher needs to have high ideals of order, and can more easily relax (after too strict discipline the first day) than later secure the ideal if the first day's standards have been too low. A happy medium is best, but, to repeat, it is better to err on the side of rigidity than of leniency. (See pp. 295-299.)

The first day will have been a success if the pupils feel (1) an interest in school, (2) a desire to coöperate with the teacher in making the machinery of school move smoothly, (3) if they have had their curiosity, wonder, or thirst for knowledge aroused, and (4) if the day has been well spent, leaving a feeling of something accomplished.

For comparison later, a teacher will wish to make a record of various abilities of each child as shown during the first week. For example, every child old enough to do so should copy some stanza or paragraph in his best penmanship, dating the sheet and recording the exact number of minutes spent on the copy. Some of the standard tests (see pp. 292-295) suited to the age of the pupils to be taught should be given and the records of results kept, with dates. The tests in spelling and arithmetic are especially easy and make one good sort of first-day seat-work. Reading, language, and composition tests, are not so easily graded, but can be given.

A young teacher, Miss Hazel Wheeler, made the excellent suggestion that for first-day composition work in an upper grade, the teacher might ask the pupils to list all the interesting things about town about which they would like their new teacher to know. At recitation time these topics could be discussed briefly, very large subtopics planned, and the several subjects (or only one, if thought best) assigned to members of the class to write so well about that the teacher would feel impelled to visit the place of interest.

Care of school property should be begun the first day and unostentatiously kept up all year. Books should be covered. The teacher will need for the fall flowers two or three inexpensive but good-looking baskets or vases, with neat squares of glass to lie under them; a good dust-cloth; several cloths for sopping spilled water or ink, perhaps; a bundle of clean newspapers for laying on the desks during any lesson that may soil or scratch the desks; twine or cord; as well as the several articles named on pp. 279-283, 283-292, 292-295.

2.—TO TEACHERS OF EXPERIENCE.

Experienced teachers will, of course, know the routine of the first day and week, and will avoid many of the difficulties met by beginning teachers. They must, however, do the same general things, but will do them more efficiently, with greater ease, and without any loss of time. More classes can be heard; more suitable assignments of work and better rest exercises will be given. The note-book in which the teacher plans to keep (for his own benefit only) characteristics of individual pupils, will show more discriminating notes than a young teacher can make. On different pages may be found, for example: *Ready to offer service, but not persevering if task is hard. Strong in history. Very weak in penmanship and spelling—must be helped daily. Grows too tired before day is over—Why?—Sleep?—Food?—Work at home? Liked by companions on the playground. Timid. Enunciation slovenly.* Such rapid diagnoses of the children will definitely assist in making the social atmosphere good, for a teacher who understands will not seat near together the domineering boy and the one most easily intimidated; nor the highly imitative child next to one who is defiant, disrespectful, ill-mannered, or profane; nor will he make the child who is naturally orderly sit close to one who scatters things about or moves constantly, thus spilling the ink in the well of the seat behind, or shaking out books, etc. Children with sight or hearing defects must be made as comfortable as possible near the front of the room.

Experienced teachers soon begin to ask one of two questions: *How can I earn more?* or, *How can I grow more?* Since to earn more one must grow more, and since growth is almost always appreciated by better salary, the questions have a common answer: Look for basal principles, suggestions for using individuality, and for means of unifying instruction. Seek to approach the new year's work with broader vision, obtained by reading between the lines of the course of study, studying many of the suggested books of reference, challenging fresh methods and devices in the light of both basal principle and past experience, and determine to make the new year one of richness for the pupils. Frequently challenge what is to be taught in the light of why it ever came to be selected as a bit of school subject-matter, and whether it is still valuable. This makes even old subject-matter and methods of work alive. No teacher can afford to miss the joy that comes from having personally defended the worth of the lesson to be taught.

In December, 1915, Mr. Geo. F. Howard, of the State University, told four hundred normal-school students that they needed just six things to become good teachers. Since these six points are as valuable for experienced as for inexperienced teachers, they are here given: (1) Know your subject-matter; make thorough preparation for the lessons to be taught. (2) Possess a true enthusiasm for the work of teaching. (3) Be interested in children. (4) Be interesting to children. (5) Be progressive. (6) Get a vision, for "where there is no vision the people perish."

3.—TO RURAL TEACHERS AND TO TEACHERS OF SEVERAL GRADES
IN ONE ROOM.

(Read the suggestions to Beginning Teachers). Rural teachers need to be, and many of them are coming to be, the best-educated and the best equipped teachers in the state—more like the school-master described by Whittier in his "Snowbound," who—

"Sang songs, and told [the children] what befalls
 In classic Dartmouth's college halls.
 [Who] early gained the power to pay
 His cheerful, self-reliant way;
 Could doff at ease his scholar's gown"
 To do a dozen other things and feel no shame;
 Who could learn of life in every place
 And turn that knowledge to account.
 "Happy the snow-locked homes wherein
 He tuned his merry violin,
 Or played the athlete in the barn,
 Or held the good dame's winding yarn,
 Or mirth-provoking versions told
 Of classic legends rare and old.
 Wherein the scenes of Greece and Rome
 Had all the commonplace of home.
 [A rare accomplishment
 Large brained, clear-eyed,—of such as he"
 May teachers of all children be!

Besides needing this fund of general information, and the ability to fit into varied situations, rural teachers have to be big enough in personality to treat sympathetically the five-year-old child whose mother "can't keep her at home when she sees the other children go to school," and yet understand the ambitions and reticence of the biggest boy in school. They must usually do their own janitor work, and often be the school carpenter, plumber, decorator, and tinker. They have to be superior managers to do everything that it is necessary to do (to say nothing of other things that are desired) during the too-short day. (See pp. 215-224.) They have to plan more seat-work for the younger pupils and more educative assignments for older pupils than do any teachers of single grades. (See pp. 283-292.) But! the joy of making school just a larger home!—with big "brothers" and "sisters" helping the younger ones and thus learning thoughtfulness of others, sympathy, gentleness, and the joy of service!—with younger pupils learning many things from just hearing the older ones recite; all learning to work independently, to take care of themselves through longer periods of inaction than is necessary in a school of one grade! What an opportunity for securing group effort and generosity of spirit towards, and appreciation of, the youngest helper and his crude results. How eager the children are to learn, if only the teacher has something worth while to give. They stand at the foot of the mountain with the world at their feet, and the teacher has only to help them climb the mountain that they may get ever wider and wider views of this wonderful world and the people in it. (See suggestions to other groups of teachers.)

The teacher's noon hour with the children gives him rich opportunities to lead one child to copy an older one, or to help the older boy keep up to his best because he *is* some younger boy's hero. If the children can be induced to eat together around an improvised table, what fun can be had with riddles, anecdotes, and repartee; what practical lessons can be given in good manners and in sanitation. For the former, at least, many a child will in later life be grateful. Is this hard? Of course it is; but the joy of conquering hard things is the finest joy in life!

Visitors are so rare in rural schools that some teachers forget to teach pupils the courteous attitude of hosts. If, in spite of the teachers' efforts to induce patrons to come to school, few visitors appear, children may be taught what should be done through several means. The teacher may appoint a child to teach some class while he plays the visitor's part, noting that all pupils are at-

tentive to their individual tasks and yet thoughtful of the guest; getting him a chair; handing him a book; relieving him of the book when the need for it is past, etc. The teacher may make the agreement with some older girl that when she asks to leave the room she will knock and be received as a visitor. The teacher then plays the courteous host, telling the visitor what is being done, asking what she particularly desires to see or hear, and, if possible, changing the program slightly to gratify the wish. Children should take pride in reciting as for a real visitor.

Such dramatization should be followed by free discussion of the pupils' behavior—where it was good, where deficient, how it could be bettered, etc. Again, the teacher may tell or read stories in which pupils behave well or badly in the presence of visitors. He may also frequently refer to conduct as desirable (or undesirable) from the standpoint of hosts. Such training gives pupils a notion of what is expected of them, and, after the first real visitor has come and gone, they may discuss with the teacher such new points of behavior as then seem necessary.

4.—TO GRADE AND DEPARTMENTAL TEACHERS.

(Read suggestions to Experienced Teachers.) Though grade teachers have some difficulties peculiarly their own, they have great opportunities for professional growth. The advantages of conferring with one another and of having the advice and criticism of superintendents, principals, and special supervisors, make for surer and more rapid growth than can be attained by any one unaided. Although most teachers recognize the advantages, a few are not always eager to pay for them in the required hard work to meet standards set. They do not realize that such hard work will bring its own reward in broader culture, wider influence, greater executive ability, or truer vision, nor that the supervisor's task is also difficult and often thankless. Occasionally they fail in loyalty and sympathy, pulling back on the load instead of pushing it. They need to remember that superintendents and supervisors are interested in the welfare of the whole system, including equipment, method of procedure, pupils, and teachers, alike. Reports or tests which are required to secure true measures of efficiency should be honestly, intelligently, and loyally administered by the teachers concerned. Perhaps a thoughtful reading of "The Message to Garcia" will help these few teachers to stand by their supervisors in their efforts to make the local school realize the function for which it was organized.

Departmental teachers, being specialists as they are in certain fields, should study the bases given for their subjects, reporting their soundness and practicality to all concerned in the success of this course of study.

5.—TO HIGH- AND NORMAL-SCHOOL TRAINING TEACHERS.

To this group the suggestion is made that the course of study be used as a text-book with student teachers. As with other text-books, parts should be slighted and other parts emphasized. Class discussion will clear up some points; others must be explained by the training teachers. Still others must be expanded and supplemented by reference reading. Students need to learn how to use a course of study, and especially how to adapt the distribution of subject-matter to local conditions which they may meet as beginning teachers.

Seat-work and drills *prepared in advance* can be criticized, while tests may be administered until students lose their dread of the technicalities of tests and appreciate their value in teaching.

6.—TO SUPERINTENDENTS, PRINCIPALS, AND SUPERVISORS.

As superintendents first urged upon the M. E. A., through their appointment of the committee which prepared Bulletin No. 51, the need of a new state course of study, so they can do most towards evaluating this result.

If they will "try out" the course with their teachers, helping the state department to find what in it is wheat and what chaff, they will be furthering the cause of education in Minnesota.

Superintendents of cities which have no present course of study can help by using this as a basis, noting what adaptations have to be made and reporting results and opinions to those interested.

Superintendents of cities already using local courses of study can help by asking teachers, in meetings assembled, to discuss divergent principles and practices of the two courses and to offer criticisms to guide in the revision which must necessarily be made in a very few years. To facilitate full returns from teachers, the superintendent might mimeograph blank reports calling for sections liked, points not clear, features most helpful, etc. Again, on his visits, the superintendent may note what the teachers find obscure or ambiguous; what suggestions are impractical; and what lines need more emphasis.

If superintendents could also find time to discuss the course of study among themselves, or at institutes and conventions, the result would without doubt propagate greater discrimination in values and larger professional coöperation.

II.—TIME ALLOTMENT OF SUBJECT-MATTER AND PROGRAM MAKING.

A.—TIME ALLOTMENT OF SUBJECT-MATTER.

A careful study of the evaluation of subject-matter as indicated in courses of study and in time allotments on programs of different states and cities, shows that at present there is little agreement. After reaching this conclusion, the writer found it verified by the more scientific report of Mr. Henry W. Holmes,* in which he discusses briefly the causes of such divergence of opinion, and the need of investigation which will remedy the matter.

Some of the causes given are: Differing lengths of the school year; differing needs of various school populations; different demands from the public as to what shall be done, which subjects are "essential," and which are "fads"; differing opinions as to the time necessary for the achievement of certain results, or as to methods which are wisest to employ; and disagreement as to what shall be included in a subject as defined.

Before a scientific distribution of subject-matter can be made, Mr. Holmes feels that we need: (1) A very careful report on the actual hours spent in reciting upon, pondering, studying, and using, a bit of subject-matter; (2) clearly understood aims of school work or of education; (3) agreement upon definitions of subjects, with perhaps new names to decrease the complexity; (4) limiting the scope of school subjects (now being done by students of "minimum essentials"); and (5) settling upon some standards of achievement for each grade in school (also in process of preparation; see pp. 292-295). Then may we know how much time should be given a subject!

* The Fourteenth Year Book of the National Society for the Study of Education, Part I.

SUGGESTED TIME DISTRIBUTION FOR

		Grade								
Subjects		I	II	III	IV	V	VI	VII	VIII	¶
Social World. (and Lit.) 135-115 Min.	English—Reading (and Literature).....	60	40	35	30	30	30	30	30	90
	Language and Comp. (and Literature)...	40	35	30	30	30	30	30	20	30
	Grammar.....	..	..	..	..	..	..	5	25	10
	Penmanship.....	10	15	15	20	15	15	10	10	10
	Phonics and Dictionary work.....	10	15	10	10	10	15	10	5	5
	Spelling.....	5	15	15	15	20	15	10	10	10
	Arithmetic (and Thrift).....	10	15	20	20	25	25	25	15*	60
Material World 80-100 Min.	Science—Geography.....	..	..	20	20	25	25	30	30	40
	Nature Study and Elementary Science..	25	25	15	15	10	10	10	10	5
	Physiology and Hygiene.....	5	5	10	10	10	10	10	10	5
	Physical Exercise, etc.....	10	10	10	10	10	10	10	10	5
	Industry—Industry—General.....	30	30	30	30	..	..	..	..	10
	Sewing or Manual Training.....	..	..	..	..	20	20	..	..	..
	Cookery or Manual Training.....	..	..	..	..	..	..	20	20	..
	Vocational Guidance (and Thrift).....	..	..	..	..	5	5	10	10	..
	How to Study (Special effort).....	10	10	10	10	10	10	10	10	..
Immaterial World 65-85 Min.	Citizenship—History, Civics, Current Events....	5	10	15	20	25	30	30	35	25
	Moral Training (with some literature)	15	15	15	15	15	10	10	10	5
	Fine Art—Music.....	15	15	15	15	15	20	20	20	10
	Drawing and related subjects.....	30	30	30	25	25	20	20	20	10
	Literature—used as a means in other subjects hence no special time allotted to it.	..	..	..	..	..	..	..	..	..
Recreation 50-30 Min.	Extra recesses or play periods, using time gained from Arithmetic, etc.....	20	15	5	5	..	..	..	..	..
	Regular recesses and necessary time for assembling and dismissing, and for general exercises at opening and closing.....	30	30	30	30	30	30	30	30	30

Total 330 minutes.

¶Rural for all classes. See Note 2.

*30 for one-half year.

NOTE 1.—This distribution must be varied to suit local needs; more or less of any one subject as demanded; use of eighth-grade spelling and penmanship time for how to study, or, for arithmetic the whole year instead of the half year as indicated (if penmanship and spelling have been conquered by eighth grade); part of the noon or recreation time for industrial subjects if necessary; supervised play at recesses and noons in place of scheduled physical training, etc.

At this juncture no one wishes to make a time allotment except as a mere point of departure, but if we agree upon our aim and upon our meaning for certain subjects, and if we accept the present work of specialists on minimum essentials and standards of efficiency as guides, we can, for our own state at least, make a suggestive and tentative time allotment, with the hope that every teacher will make such changes as the conditions of his work demand. The greater the number of teachers who report on the values and the faults of this distribution, the surer will Minnesota take a leading place in this scientific movement. (Please report!)

Replies to requests made of students from all parts of Minnesota as to the length of a school day in their localities show that a five- to a five- and- one-half-hour day is more general than any other. Many private schools have only morning sessions (three hours), and a few city schools have pupils come in two relays, each group receiving instruction for about three hours; but most public schools have two sessions of three, and two to two and one-half hours, respectively; many schools have less than five and some have full six hours. In certain locali-

A FIVE-AND-ONE-HALF-HOUR DAY.

Usual number of recitations per week in graded schools

15 or 20 in primary grades to 5 in upper.

10 in primary grades to 5 in upper.

5 in eighth grade, once a week in seventh grade, if at all.

5, possibly 3, in eighth grade.

5 except in eighth grade, when 1 per week (25 minutes) may be better.

5 in general. Occasionally a "match," using all of one week's time in eighth grade (50 minutes).

5 for $\frac{1}{2}$ year only, or 2 or 3 a week for a whole year in eighth grade, 5, below eighth grade.

5 sometimes combined with Industry for an excursion.

5 sometimes combined with Geography or Industry in an excursion.

5, 2, or 1—depending on kind of work and grade (25 minutes a week—often done in general exercises).

{ 2 or 3 if gymnasium and swimming-pool are used.

{ 5 if room and halls are used (50 minutes a week).

5 in lower grades shown.

2 (100 minutes a week.)

2 (100 minutes a week.)

5, 2, or 1—depending on kind of work (25-50 minutes a week—often done in general exercises or related

to composition work.)

{ 5 in lower grades teaching children to do seat-work correctly.

{ 2 in upper grades, teaching children to organize, use references, use a library, etc., especially in Geog-

raphy and History—sometimes in Arithmetic or Literature.

5 in upper grades; often done in General Exercises in lower grades.

5 in primary rooms, 2 in older grades (75-50 minutes a week). (Often done in General Exercises.)

5 in general, though sometimes 10.

5 in primary rooms, 2 in older grades (150-100 minutes a week).

Some good book or poem on hand to fill odd moments or an occasional General Exercise.

5 needed in grades indicated.

If physical exercises need to be given more time, recesses may be shortened.

General-exercise periods may be lengthened by using time allotments for subjects suitable to use thus.

NOTE 2.—Rural schools contain so many classes which can not always be united that a different time apportionment seems necessary, more minutes being given to the "three R's." The number and the sizes of classes will regulate how much of the time of one subject is to be spent in recitation with each grade. (See sample rural programs.) For example, 25 minutes a day given to history may be distributed thus: 25 minutes Monday and Wednesday to fifth- and sixth-grade history; 25 minutes Tuesday and Thursday to seventh- and eighth-grade history; 25 minutes Friday to whole room, or to first four grades, or general citizenship topics, current events, or historical biographies, etc.

If two classes are indicated to recite in one period, they may recite together, alternating the years of work (for example, taking seventh-grade history in odd numbered years and eighth-grade history in even numbered years); or each class may have half the time, or whatever time is fair according to the number of pupils in each class.

ties the primary pupils have shorter sessions than do the older pupils, but the average day is five- to five-and-one-half hours, and therefore 330 minutes are used as the basis for the above allotment of time to different subjects.

B.—PROGRAM MAKING.

A well-planned program, followed to the letter, is one excellent means of teaching pupils the habits of punctuality, of careful preparation of daily lessons and of self-control in providing an appropriate time for doing each task regardless of momentary preference. Such a program also saves time and energy which a haphazard plan of work loses. Children should be able to see the program, and, if blackboard space is limited, the program should be printed on a card and hung where it can be seen by teacher, pupils, and visitors.

Once made, a program should be followed to the minute, though there must of course be exceptions such as may be made to suit the superintendent or a visitor interested in some special child or subject. Teacher and pupils thus form

the habit of being ready at the appointed time, and much of the confusion sometimes heard in schoolrooms can be avoided, for, without warning, children should be ready for the coming recitation. Sometimes a mere nod from the teacher can call a whole class, the remainder of the school scarcely noting the movement. Not long since, the writer saw the opposite of this when a teacher called a class of one pupil by four taps of the bell, thus disturbing all the other pupils and wasting time.

However, before the teacher knows his pupils, he should not attempt to make a permanent program, but should plan to accomplish two main purposes during his early days in a new school: (1) To keep all happily busy, at worth-while tasks; and (2) to find out the children's weaknesses and strength—that is, to review and test them on the ground preparatory to the new work of the year.

A temporary program should be on the blackboard before nine o'clock of the opening day, should be rigidly followed that day, varied on each of several succeeding days if necessary, and finally replaced by a permanent program. An inexperienced teacher may not be satisfied that he has the best possible program before Thanksgiving; but the best way to prove a program's value or weakness is to follow it exactly. If it needs changing, change it; but do not let an unused program remain on the wall a day.

To keep all pupils happily at work before regular tasks can be set, the teacher must have more kinds of seat- or study-work planned than will ever afterwards be necessary in a single day. Little children should have frequent relaxation periods and much variety in tasks. Older pupils should go home even at noon with the happy feeling that something has been accomplished and more is to be accomplished during the days to follow. The better to test children's ability to work independently, it will be well to have all recite together in several subjects, and then have a common study period, during which the teacher can teach pupils the best ways of preparing lessons or of doing assigned tasks.

The testing of pupils' ability in different subjects may not demand so much time per pupil as do teaching-lessons, but will demand longer or duplicated recitation periods to hear every child recite. It is probable, therefore, that not over half the school can be tested in one day, or that only a few important subjects can be so handled; but every child should have recited in at least one important subject.

The *factors* to be considered in making a permanent program are three (or four): (1) The relative value of subjects; (2) economy of time, of energy, and of materials; (3) the psychological laws of work and fatigue; and, in some systems of schools, (4) fixed times for recesses or for special-teachers' instruction periods.

Factor 1: For a discussion of the relative values of the different school subjects, see Time Allotment above. In the making of a program the teacher must consider how to subordinate the less essential subjects and still give them place. There are four main ways of doing this: (1) Alternate one less-important subject with another, either by days, weeks, or seasons; (2) shorten the daily period for that subject; (3) have larger groups recite, during a given time, than in the more essential subjects; (4) combine any closely related subjects.

Factor 2: Regarding economy of time and energy experienced teachers need no help; but inexperienced teachers do not realize the value of saving the precious minutes, and are therefore inclined to plan work so that needless school time is spent cleaning blackboards, in distributing and collecting drawing or industrial material, in sharpening pencils, and so on. A lesson which demands much use of the blackboard, with work to be left for copying by the children or correcting

by the teacher, should be placed before some intermission, so that monitors (who count the task an honor) get all in readiness for the next session. Lessons which demand much distribution and collection of material should be put just after or just before an intermission, so that one phase of the passing can be done by monitors outside of the work hours. For example, a painting lesson, with its boxes, brushes, specimens, newspapers, or pasteboards for keeping the desks clean, water-cups, paint-rags, and possibly other tools, as well as the finished but moist paintings to be disposed of, would best come just before noon. Also, since drill lessons require much less time but greater alertness on the part of pupils, phonic or arithmetic drills can well be sandwiched in between longer periods needed for developing lessons. Also, to economize materials, it would be better to have a cutting-and-pasting lesson once a week for a longer period, than daily for five minutes, since in the longer period scraps of paper and paste could be more economically used than in short periods.

Factor 3: There are too many laws of work and fatigue for all to be considered or discussed here. As it would be equally impossible for a beginning teacher to obey all of them in his first program making, only a few laws are given: (1) The younger the pupils, the greater variety of work should there be, with shorter periods of concentrated effort alternating with pleasant forms of relaxation. (2) Moderate, regular exercise is in general better than spasmodic, excessive work—that is, five minutes spent daily on some form of drill will produce better results than will a twenty-five minute period once a week. (3) Fatigue diffuses, so that, for example, long eye-strain may produce general fatigue, or general fatigue may cause a lack of acuteness in hearing or seeing, hence the program should allow for periods of real recreation, not mere change of work; teachers having no recesses because they cause disciplinary troubles do not judge values well; to apply the law of diffusion of rest or fatigue to program making, a teacher will not put penmanship just after an outdoor recess or a gymnastic game when the muscles are too relaxed to do work demanding fine coördination, but will put it before such a rest period or in the middle of a session; on the other hand, singing may well follow an exercise in which the lungs have been refreshed. (4) Fatigue usually increases and decreases rhythmically, so that a program should alternate hard and easy work for the majority of the pupils; individual differences in fatigue phenomena must also be studied, so that pupils who fatigue more quickly than others may not be injured by straining to work when too weary. No two grades or schools are exactly alike, so no two programs can be alike; but when a teacher once finds what his pupils can best do at given hours of the day, that program should be faithfully followed.

Factor 4: In systems where certain days are rearranged to suit special teachers, or where intermissions are planned to meet playground facilities, the teacher has additional problems in program making which only experiment can satisfactorily solve.

In trying to follow a program faithfully, the inexperienced teacher is apt to leave himself no time for change of classes, general directions to the class about to begin study; or general inspection of work just completed by some class. Such time must be provided for by leaving a minute or two free at certain intervals, or by dismissing one class early enough to assign seat-work and yet call the next class on time.

General exercises may occur at either or both the opening and closing of the day, but should be made definitely educative in their consummation—and being “educative” does not exclude humor. Every program should have some place

upon it for fun, in the shape of a bright story to be read or told, anecdotes, puns, original but kind cartoons, riddles, jokes, games, or intellectual contests. If no other place can be had, the last five to ten minutes of the day may profitably be so spent.

SAMPLE PROGRAMS.

NOTE:—All programs show the minute for beginning a recitation, and the number of minutes to be used therein.

PROGRAM for a FIRST or a SECOND GRADE.

With three classes, adapted from one used by MISS IRENE FERGUSON, Hillsboro, Ill.

A. M.

- 9.00-10—Opening Exercises.
- 9.10-10—Reading, C.
- 9.20-15—Penmanship, A and B.
- 9.35- 5—Rest Exercises, all.
- 9.40-15—Reading, A.
- 9.55- 5—Gymnastics, all.
- 10.00-15—Reading, B.
- 10.15- 5—Sense Training, all.
- 10.20- 5—Number, C.
- 10.25-10—Number, A.
- 10.35-15—Recess, all.
- 10.50-10—Number, B.
- 11.00-15—Phonics, C (then dismiss).
- 11.15-10—Word Study, A. (Spelling.)
- 11.25-10—Word Study, B. (Phonics.)
- 11.35-10—Corrective language games, A and B.
- 11.45-10—Nature Study, A and B.
- 11.55- 5—Dismissal.

P. M.

- 1.15-10—Rote Singing, all.
- 1.25-10—Reading, C.
- 1.35-12—Reading, A.
- 1.47- 5—Rest, all.
- 1.52-13—Reading, B.
- 2.05-10—Number, C.
- 2.15- 5—Games, all.
- 2.20-10—Written Language including Spell., A.
- 2.30-10—Written Language including Spell., B.
(A and B often united.)
- 2.40-15—Recess, all.
- 2.55-15—Oral Language, C (often dismiss).
- 3.10-13—Oral Language, A.
- 3.23-12—Oral Language, B.
(A, B, and C often united.)
- 3.35-20—Drawing, A and B.
- 3.55-15—Note Singing, A and B.
- 4.10-05—Dismissal.

If school should be in session less than the six hours here shown, recess and the longer recitations could be shortened. This program is excellent in that it provides for three sections, since absence or immaturity or both will very soon make three divisions necessary, in almost every first grade, and in many second grades.

PROGRAM for a THIRD or a FOURTH GRADE.

Furnished by MISS GRACE P. KISSLING, Winona city schools.

A. M.

- 9.00-10—Morning Exercises, including story told by teacher, or teaching a stanza of some poem, memory gem, or observations made by children out of doors.
- 9.10-20—B, Reading.
- 9.30-15—B and A, Phonics in connection with Spelling and drill in the use of the dictionary.
- 9.45-15—A and B, Writing.
- 10.00-20—A, Numbers.
- 10.20-15—Recess—out-door play, supervised by teacher; rainy days, indoor games and physical exercises.
- 10.35-20—B, Numbers.
- 10.55-20—Drawing.
- 11.15-20—A, Reading.
- 11.35-10—Written Spelling, A and B.

P. M.

- 1.30-20—B and A, Language.
- 1.50-20—B, Reading.
- 2.10-20—A and B, Music.
- 2.30-10—Recess. (See morning recess.)
- 2.40-20—A, Reading.
- Monday, Wednesday, Friday.*
- 3.00-15—A and B, Geography. In this work, make excursions to city's factories, institutions, etc., and use information gained in arithmetic, language, etc.
- Tuesday and Thursday.*
- 3.00-15—A and B, History.
- 3.15-15—*Monday*—Individual help to backward pupils.
- Tuesday and Wednesday.* Hygiene (for 6 weeks).
- Thursday and Friday.* Nature Study—making frequent excursions.

To suit special teachers, classes may be shifted, but so far as possible the regular hours are those of the special teachers. Alternate *Thursdays*—Music teacher 10.45 to 11.05. Then take five minutes from morning exercises and move classes forward, keeping right number of minutes, putting Drawing in afternoon in place of Music. Alternate *Wednesdays*—Drawing teacher—regular period. *Fridays*—Writing teacher—regular period.

PROGRAM for a FIFTH or a SIXTH GRADE.

Furnished by MISS MABEL McLENNAN, Winona city schools.

A. M.

- 9.00-10—Opening Exercises—Music, Literature, Current Events, etc.
 9.10-20—Spelling—short period of study and drill; then writing of lesson from memory.
 9.30-30—A, Arithmetic. (B, study Geography or History.)
 10.00-30—B, Geography or History (alternate). (A, study Geography or History.)
 10.30-5—Intermission (when weather permits, outdoor recess of 20 minutes. Periods following consequently shortened.)
 10.35-25—A, Geography or History. (B, study Arithmetic.)
 11.00-25—B, Arithmetic. (A, study Reading.)
 11.25-20—Music.
Fridays.
 10.30-11.45—Sewing and Manual Training.

P. M.

- 1.30-20—Writing—twice a week.
 1.50-10—General period—Hygiene, Literature.
 1.30-30—Drawing—three times a week.
 2.00-25—A, Reading. (B, study Language.)
 2.25-20—B, Language. (A, study Language.)
 2.45-20—A, Language. (B, study Reading.)
 3.05-25—B, Reading. (A, study Arithmetic.)

A city school where special teachers teach their special subjects at regular intervals, hence adjustments must be made thus: Writing teacher every *Tuesday*, 10.10-10.20; Drawing teacher, alternate *Mondays*, 9.45-10.10; Music teacher alternate *Mondays*, 2.25-2.45.

PROGRAM for a SEVENTH or an EIGHTH GRADE.

Furnished by MISS AGNES STORIE, Indianapolis schools.

A. M.

- 8.30-10—Opening Exercises.
 8.40-30—English, Spelling, Dictation, Word Study, Composition, all.
 9.10-10—Physical Exercises.
 9.20-30—Mathematics, A.
 9.50-30—English Grammar, A and B. (Classes alternate seat-work and recitation.)
 10.20-15—Recess.
 10.35-30—Mathematics, B.
 11.05-30—Literature, A, first 4 days of week, B on Fridays.
 11.35-25—Geography and History, B.

P. M.

Monday, Tuesday, Wednesday.

- 1.30-30—Literature, B.
 2.00-25—Geography and History, A.
 2.25-35—Penmanship and Music, A and B.
Thursday and Friday.
 1.30-45—Drawing.
 2.15-25—History and Geography, A or B (each one day or one two days, as needed).
 2.40-20—Physiology and Hygiene, or general lessons.

PROGRAM for a RURAL SCHOOL.

Furnished by MISS MARGARET McADAM, of Blooming Prairie, Minn.

A. M.

- 9.00-10—Morning Exercises.
 9.10-10—Beginners' Class (Reading preparation).
 9.20-10—1st, Reading.
 9.30-10—2d, Reading.
 9.40-20—7th and 8th, Reading. (Spelling and Composition.)
 10.00-15—3d and 4th, Reading.
 10.15-15—5th and 6th, Reading.
 10.30-10—Recess.
 10.40-10—Beginners' Reading (Later in year, Numbers.)
 10.50-10—1st and 2d, Number.
 11.00-10—2d and 3d, Number.
 11.10-15—4th and 5th, Arithmetic.
 11.25-15—6th and 7th, Arithmetic.
 11.40-20—8th, Arithmetic.
 12.00-40—Noon.

P. M.

- 12.40-10—Beginners' Reading.
 12.50-10—1st, Reading.
 1.00-10—2d, Reading.
 1.10-15—3d and 4th, Reading, 3 days. (Language, 2 days.)
 1.25-15—5th and 6th, History, 3 days. (Language, 2 days.)
 1.40-20—7th and 8th History (Reference and Composition work.)
 2.00-10—Writing, except Friday; Drawing, Friday.
 2.10-10—Recess.
 2.20-10—Word Study. (Phonics.)
 2.30-10—2d and 3d, Home Geography. (Language.) Industrial work for seat-work.
 2.40-15—4th and 5th, Geography. (Language.) Industrial work for seat-work.
 2.55-15—6th and 7th, Geography. (Language.) Industrial work for seat-work.
 3.10-15—8th, Grammar.
 3.25-05—5th and 6th, Spelling (from speller); (group spelling an advantage).

Keep up drills in arithmetic by letting 2d grade recite with 1st, 3d with 2d, 4th with 3d, etc., whenever practicable. Noon hour may be lengthened and school close later, but closing school

(Concluded on Page 224.)

PROGRAM OF RECITATION AND STUDY

Furnished by MISS MARY ENSFIELD, Specialist

A. M.	RECITATION.	(4) GRADE I.	(4) GRADE II.	(5) GRADE III.
9.00-15	<i>Opening Ex.*</i>	<i>Opening Ex.*</i>	<i>Opening Ex.*</i>	<i>Opening Ex.*</i>
9.15-10	1st and 2d, <i>Numbers.</i>	<i>Numbers.</i>	<i>Numbers.</i>	Prep. <i>Numbers.</i>
9.25-10	3d, <i>Numbers.</i>	Stringing.	String'g or Weav'g	<i>Numbers.</i>
9.35-15	4th, <i>Numbers.</i>	Stringing.	String'g or Weav'g	Use pt., qt., gal. measures.
9.50-20	5th and 6th, <i>Arithmetic.</i>	Sand table.	String'g or Weav'g	
10.10-20	7th and 8th, <i>Arithmetic.</i>	Excused.	Excused.	Excused.
10.30-15	<i>Recess.</i>	<i>Recess.</i>	<i>Recess.</i>	<i>Recess.</i>
10.45-15	1st, <i>Reading.</i>	<i>Reading.</i>	Use readers.	Prep. Read.
11.00-10	2d, <i>Reading.</i>	{ Build sentences from hectographed words from Reading.	<i>Reading.</i>	Prep. Read.
11.10-15	3d and 4th, <i>Reading.</i>		Build words out of letters.	<i>Reading.</i>
11.25-20	†7th and 8th, <i>Hist. or Civics.</i>	Excused.	Excused.	Illus. Read. by paper cutting.
11.45-15	†5th and 6th, <i>Read. or History.</i>			Excused.
12.00-60	<i>Noon.</i>	<i>Noon.</i>	<i>Noon.</i>	<i>Noon.</i>
P. M.				
1.00-10	‡1st, <i>Reading.</i>	<i>Reading.</i>	Prep. Read.	Prep. Read.
1.10-15	‡2d, <i>Reading.</i>	Free-Hand Drawing.	<i>Reading.</i>	Prep. Read.
1.25-15	‡3d, <i>Reading.</i>	Free-Hand Drawing.	Free-Hand Drawing.	<i>Reading.</i>
1.40-20	4th, <i>Language, 1, 3, 5. Geography 2, 4.</i>	Picture-Books.	Free-Hand Drawing.	Free-Hand Drawing.
2.00-15	5th and 6th, <i>Language 1, 3, 5. Hygiene 2, 4.</i>	Excused to play.	Excused to play.	Prep. Spelling.
2.15-15	7th and 8th, <i>Grammar 1, 3, 5. Hygiene 2, 4.</i>			Prep. Spelling.
2.30-15	<i>Recess.</i>	<i>Recess.</i>	<i>Recess.</i>	<i>Recess.</i>
2.45-15	1st, 2d, and 3d, <i>Language.</i>	<i>Language.</i>	<i>Language.</i>	<i>Language.</i>
3.00-15	3d and 4th, <i>Writing. Spelling.</i>	<i>Dismissal.</i>	<i>Dismissal.</i>	<i>Spelling and Writing.</i>
3.15-30	<i>Geography, 7th and 8th, 1,3,5. 5th and 6th, 2, 4.</i>			<i>Dismissal.</i>
3.45-15	5th, 6th, 7th, and 8th, <i>Writing. Spelling.</i>			
4.00	<i>Dismissal.</i>			

* *Music, Drawing, Nature Study, Story Hour, Discussion.*† Combined for *Agriculture* on Mondays during spring term.‡ Combined for *dramatization* and *reading poems* some times.

§ Pupils take turns in preparing and serving hot noon luncheon.

FOR RURAL SCHOOLS, (30 PUPILS.)

in Rural Education, Winona Normal School.

(6) GRADE IV.	(3) GRADE V.	(2) GRADE VI.	(4) GRADE VII.	(2) GRADE VIII.
<i>Opening Ex.*</i>	<i>Opening Ex.*</i>	<i>Opening Ex.*</i>	<i>Opening Ex.*</i>	<i>Opening Ex.*</i>
Prep. Numbers.	Prep. Arithmetic.	Prep. Arithmetic.	Prep. Arithmetic.	Prep. Arithmetic.
Prep. Numbers.	Prep. Arithmetic.	Prep. Arithmetic.	Prep. Arithmetic.	Prep. Arithmetic.
<i>Numbers.</i>	Prep. Arithmetic.	Prep. Arithmetic.	Prep. Arithmetic.	Prep. Arithmetic.
Drill on tables on blackboard.	<i>Arithmetic.</i>	<i>Arithmetic.</i>	Prep. Arithmetic.	Prep. Arithmetic.
Drill on tables on blackboard.	Finish Prob.	Finish Prob.	<i>Arithmetic.</i>	<i>Arithmetic.</i>
<i>Recess.</i>	<i>Recess.</i>	<i>Recess.</i>	<i>Recess.</i>	<i>Recess.</i>
Prep. Reading.	Prep. Reading.	Prep. Reading.	Prep. Hist. or Civ.	Prep. Hist. or Civ.
Prep. Reading.	Prep. Reading.	Prep. Reading.	Prep. Hist. or Civ.	Prep. Hist. or Civ.
<i>Reading.</i>	Prep. Reading.	Prep. Reading.	Prep. Hist. or Civ.	Prep. Hist. or Civ.
Industrial Work.	Ind. Work or §Prep. Lunch.	Ind. Work or §Prep. Lunch.	<i>History, 1, 2, 3, 4. Civics, 5.</i>	<i>History, 1, 2, 3, 4. Civics, 5.</i>
Industrial Work.	<i>Reading, 1, 3, 5. History, 2, 4.</i>	<i>Reading, 1, 3, 5. History, 2, 4.</i>	Ind. Work or §Prep. Lunch.	Ind. Work or §Prep. Lunch.
<i>Noon.</i>	<i>Noon.</i>	<i>Noon.</i>	<i>Noon.</i>	<i>Noon.</i>
Prep. Language or Geography.	Prep. Language or Hygiene.	Prep. Language or Hygiene.	Prep. Grammar or Hygiene.	Prep. Gram. or Hygiene.
Prep. Language or Geography.	Prep. Language or Hygiene.	Prep. Language or Hygiene.	Prep. Grammar or Hygiene.	Prep. Gram. or Hygiene.
Prep. Language or Geography.	Prep. Language or Hygiene.	Prep. Language or Hygiene.	Prep. Grammar or Hygiene.	Prep. Gram. or Hygiene.
<i>Lang. or Geog.</i>	Prep. Spelling.	Prep. Spelling.	Prep. Spelling.	Prep. Spelling.
Prep. Spelling.	<i>Lang. or Hygiene.</i>	<i>Lang. or Hygiene.</i>	Prep. Geography.	Prep. Geography.
Prep. Spelling.	Prep. Geography.	Prep. Geography.	<i>Gram. or Hygiene.</i>	<i>Gram. or Hygiene.</i>
<i>Recess.</i>	<i>Recess.</i>	<i>Recess.</i>	<i>Recess.</i>	<i>Recess.</i>
<i>Spelling and Writing.</i>	Prep. Geography.	Prep. Geography.	Prep. Geography.	Prep. Geography.
<i>Dismissal.</i>	<i>Geography, 2, 4.</i>	<i>Geography, 2, 4.</i>	<i>Geography, 1, 3, 5.</i>	<i>Geography, 1, 3, 5.</i>
	<i>Spelling and Writing.</i>	<i>Spelling and Writing.</i>	<i>Spelling and Writing.</i>	<i>Spelling and Writing.</i>
	<i>Dismissal.</i>	<i>Dismissal.</i>	<i>Dismissal.</i>	<i>Dismissal.</i>

This program has been tried out and proved to be good.

Words printed in italics indicate recitations.

Numbers in parentheses before grades indicate number of pupils in the grade.

Numbers after the subjects indicate the days of the week when the class recites.

(Concluded from page 221.)

at 3:30 gives children a chance to assist with the work and yet get home before dusk. Let youngest pupils have extra recess periods to play out of doors or in the halls. Writing only ten minutes, but make *all* lessons writing lessons. Drawing only one day, for *instruction* only; *practice* for seat-work other days. In the lower grades language must be based on other school subjects indicated in parentheses. In grades 5, 6, 7, a language-book may be used a part of the time as a guide. Word drills and word study should precede the reading lessons in lower grades. Phonics should be at a separate period at least once a day. Organize a club of some kind. Have it meet for a general program the last quarter of a day of each month. Sewing and other industrial work may be done in clubs outside of school.

PROGRAM FOR A RURAL SCHOOL.

Furnished by Miss GEORGINA LOMMEN of the State Agricultural School.

(School of 30 pupils: 1st grade 6, 3d grade 6, 4th grade 4, 5th grade 6, 7th grade 3, 8th grade 5.)

A. M.

- 9.00-10—Opening Exercises.
- 9.10-10—Word Study.
- 9.20-10—Primer class.
- 9.30-15—8th, Arithmetic.
- 9.45-20—3d and 4th, Reading (alternate silent and oral).
- 10.05-15—5th, Reading.
- 10.20-10—7th, Reading.
- 10.30-10—Recess.
- 10.40-10—Primary, Number.
- 10.50-15—8th, Reading.
- 11.05-15—3d and 4th, Number (alternate oral and board work.)
- 11.20-25—5th and 7th, Arithmetic (alternate oral and board work.)
- 11.45-15—Writing.
- Noon hour—Games, lunch, monitors' reports, sewing, duties, etc.

P. M.

- 1.00-10—Primer class, Reading, Language or Phonics.
- 1.10-15—3d and 4th, Reading (alternate oral and silent.)
- 1.25-20—7th and 8th, Geography (alternate years).
- 1.45-15—5th, Geography.
- 2.00-05—Rest Exercises—Drills, Games, Songs, Marches.
- 2.05-15—3d and 4th, Geography (Nature Study or Language).
- 2.20-15—8th, Grammar.
- 2.35-10—Recess.
- 2.45-15—Primary History (1, 2, 3, 4).
- 3.00-20—7th and 8th, History (alternate years.)
- 3.20-10—7th, Language.
- 3.30-15—5th, History or Language.
- 3.45-15—Spelling classes.

On Fridays, omit last classes and have Debate, Literary Work, Manual Training, Sewing, or Handwork, for 1½ hour.

NOTE:—If necessary, on Fridays, shorten noon hour to a half hour rather than omit so many classes. If best, have geography and history on alternate days, doubling the time for both. Language must grow out of history, geography, etc., or be based on agricultural work, which must be done in general exercises, at noon, etc. Opening Exercises may consist of current events, the reading of good books, memory gems, lives of famous men and women, nature study, songs, story-telling by teacher and pupils, agriculture, hygiene, and study of vocations. The wise teacher will provide opportunity for changes—physical exercises, songs, games, marches, etc.—at least once during every quarter of a day.

III.—SELECTION OF TEXT-BOOKS.

One of the things every teacher has to do is to select one or more text-books for the school in which he teaches. The tendency of an inexperienced teacher is to take the word of an agent, or to select a book used by a friend or used in some school which he admires. The difficulty with such selection is that, though the book possess great merit, it may not at all meet the needs of the particular school for which it is intended. Again, teachers differ so widely in their methods of using a book that what suits one teacher does not another. "In Mythland," for first or second grade; "Pinocchio," for third or fourth grade; "Lamb's Tales of Ulysses," for fifth grade; and "Alice in Wonderland," for the sixth grade; are books which the writer has known certain teachers to use with remarkable success, while other teachers could get neither reading results nor interest from the children. Hence, it is not safe to select a book merely because some one else has used it successfully.

Since readers wear out and are either changed or supplemented more frequently than are other texts, more detailed suggestions are given for selecting a reader than for other books. In fact, topics 1, 2, and 4, under Readers, with very little adaptation, fit all texts.

A.—HOW TO SELECT A READER FOR A PARTICULAR SCHOOL AND GRADE.

The natural order of procedure is given, rather than one which indicates the relative values of the acts of judgment. Of course, if at any point the book is rejected, the remaining points are not even considered. Topic three is, assuredly, the one of greatest weight.

1.—*Handle the Book to Note its General Make-up.*

- a. Cover—Attractive or objectionable? Color sensible for daily use? Binding strong and yet flexible?
- b. Type—As pages are rapidly turned, does the type seem good? Clear? Suited to age of pupils who are to use the book? Is the reading material well arranged on the page?
- c. Paper—Is it of good quality? Durable? Well sewed at back?
- d. Illustrations—Are they pleasing to children? Suited to the stories? Well colored? Artistic? Well sewed, if full-page pictures, or only pasted in? Too few? Too many?

2.—*Look at the Title Page and those immediately following.*

- a. Author—Who is the author? Known, or never heard of? Holds what teaching position? Likely or not to make a good reader?
- b. Publishers—New, or well established? With a reputation for good book making? A firm that publishes what is really good, or merely what will sell?
- c. Copyrights—Date of first printing or copyright? Any revisions made? Even though date is recent, does the book seem up to date? (In general the life of a reader without revision is not over ten years, though some deserve a longer life.)
- d. Preface or Introduction (or both)—What is the specific aim of the book? Is that the aim needed by the school which is to use the book?
- e. Table of Contents—Does the material, judged by the titles and authors quoted, carry out the specific aim or not? Does the material seem to duplicate much already possessed by the particular school in need of a reader? Or is it mainly new material? Which is wanted for this school at this time, new material or the same material in new and attractive form?

3.—*The Subject-Matter itself.*

Is it literary in style? Written by good authors? Or is it "made material" for the sake of some device being exploited? Does it meet expectations aroused by preface and table of contents? Is it well graded in thought? In vocabulary? Is it interesting in form? Better than material already in use? Is there variety, or sameness, in style? Which is most needed here? Are the kinds of literature needed by this grade included?

4.—*Appendix or Supplement.*

Are there suggestions as to the use of the book? Are there aids to the teacher, such as the vocabulary of each lesson, if primary; a glossary, if for older pupils; or notes, pronunciations of foreign or unusual words, etc.? Or, does a "Manual" accompany the reader or set of readers? If so, does it furnish the help desired?

NOTE: Every grade should have, besides the regular texts of standard difficulty, one or more sets of supplementary readers which, first, are below the standard in difficulty; and, second, contain especially interesting material. These texts should not be used by lower grades, but should be left for rapid sight reading or for use by children a bit below grade.

B.—HOW TO SELECT AN ARITHMETIC TEXT.

After adapting for use sections 1, 2, and 4, above, the teacher may ask himself such questions as these:

1.—*For Primary Work.*

- a. When and how are the different topics introduced? Does this agree with the Course of Study I am to use? With my ideas? That is, can I teach it successfully? Could I push the book up (or down) a grade and make it fit our school's needs?
- b. Is the sequence of topics good? Is there sufficient drill on the fundamentals?
- c. Is there sufficient provision for seat-work? Is it of the right sort? Can children follow the directions without help? Do the problems correlate with other work they are doing—for example, gardening, manual training, geography? Does the vocabulary used correspond in general with that of the reader in use, or must there be vocabulary lessons on the arithmetic text? If so, can I make a place for that?
- d. Are there any suggestions as to tests for ranking pupils by grades? If so, do they seem sensible? Are they administered with a satisfactory degree of ease?

2.—*For Work above Primary.*

In addition to the points under 1 above, the teacher may want to know:

- a. Is there any provision for frequent reviews or drills upon the fundamental operations? If not, is there time for me to add these necessary drills? Can I omit any topics to make such provision?
- b. Is the text mathematically accurate in use of terms, in definitions, etc.? Does it introduce any algebra or geometry? If so, is such work correct? Sufficient to help pupils understand literal numbers and equations when reached? Too much?
- c. Are the applications life-like? Do they fit modern business methods? Are the problems worth while spending time upon from either (or both) the processes involved or the subject-matter?
- d. Are the topics developed well? Are there any suggestions for teaching the topics? Do these fit my ideas, or would I have to discard the book except for problems? Is the material of the book arranged for easy reference, or else well indexed, so pupils can turn readily to a desired topic?

- e. Is there any provision for "mental arithmetic" in fundamental processes? In estimating results so as to check the rationality of accurate result?

C.—HOW TO SELECT A GEOGRAPHY TEXT.

Some teachers, particularly specialists in geography, prefer to use no text-books, but want their pupils to have good maps or atlases and geographical readers or other reference books. If, however, a text is to be used, the questions a teacher will want to ask, besides those implied in the topics above, will relate to the text, the maps, and the pictures.

1. *The Text.*

- a. Is the material so arranged as to be in itself a good general course of study? Can the topics be rearranged to suit our local needs? To suit my plan of development?
- b. Does it emphasize the same topics we need to emphasize, and subordinate the topics we feel to be less important for our use?
- c. Will it help pupils to see relative values? To learn to study? To get main points? To develop a topic so that it can be given with reasonable confidence by the student? Will it give a new viewpoint to a topic developed orally, thus fixing the concepts more firmly?
- d. Are the statistics, summaries, pronunciations, etc., up to date and accurate, so that the text may become a handy reference-book to be used in connection with other lessons too?

2. *The Maps.*

- a. Are there maps to show all the things needed: Surface, drainage, winds, political divisions, population, industrial regions, commercial routes, etc.?
- b. Are these maps sufficiently detailed for the age of pupils who need them and yet not so detailed as to confuse them?
- c. Can I use these maps in training pupils how to read maps, and get from one all that is possible?

NOTE: Every teacher will need to supplement the text-book maps by outline maps for practice in locating surface, political, or industrial features. Such maps can be bought, can be hectographed, or can be sketched by the pupils.

3. *The Pictures or Illustrations.*

- a. Are they well made, attractive, and artistic, as well as suited to the text?
- b. Will they definitely assist the pupil in forming concepts, relating ideas, and applying principles?

Since not all schools have regular texts in the other subjects of the curriculum, the suggestions for judging readers, arithmetics, and geographies, are probably sufficient to illustrate the need of careful selection, noting (1) that the book in itself is possessed of educative value; (2) that its content fits local needs and is authoritative; and (3) that the mechanical make up of the book is satisfactory. Miss Martha Wilson, Supervisor of School Libraries, has an excellent outline on points to be noted in the selection of dictionaries.

IV.—HELPS ON ENGLISH.

A.—THE INTERRELATION OF THE ENGLISH SUBJECTS.

(An elaboration of the outline on p. 12, covering pre-school as well as school ages.)

I. The child needs to understand others, hence listens—

A. Involuntarily:

1. To sounds in general—
 - a. Only general meanings of satisfaction or displeasure secured.
 - b. Direction of sound noted.
2. To mother's voice.
 - a. To be comforted—
 - (1) By mere nearness.
 - (2) By soothing tones.
3. To others' voices.
4. To special sounds.
 - a. Preparation of food.
 - b. Preparation for a ride.
 - c. Preparation for bed-time.
 - d. Company, etc.

B. Voluntarily:

1. To discriminate attitude of companions towards the child.
2. To discriminate ideas.
3. To learn vocabulary for self through imitation.
4. Later in life, to acquire ideas, ideals, emotions.

II. The child wants others to understand him, hence tries to communicate—

A. His actual needs—hunger or satisfaction, pain or pleasure, loneliness or comfort, by—

1. Intonation, large body movements, gesture, facial expression, etc., (about all that seem necessary).
2. Repetition of sounds for the same causes—the beginning of a self-made vocabulary.

B. His desires.

1. Not so easily conveyed as the more general needs.
2. So variable as not to permit a settled mode of expression.
3. Not so readily recognized by people in social environment.
4. Hence the child begins to imitate "*how others say it.*"
5. Constant alternation of *listening* and of *trying* the new sounds develops the child's conventional vocabulary.
6. With advancing years he makes finer and finer discriminations and so secures a choicer vocabulary and the basis for new thoughts.

III. The child revels in speech for its own sake, hence uses language as an end.

A. For pure love of sounds heard.

1. Full, resonant, open sounds.
2. Absurd combinations just for fun, no meaning necessary.

B. For pure pleasure of vocalization.

1. Chattering, with no intention of conveying meaning.
2. Talking to self in nonsense syllables for just the fun of talking.
3. To get feeling of power that speech gives one.

C. For the satisfaction found in rhythm.

1. Rhythm by accent.
2. Rhythm by repetition.
3. Rhythm by rhyme (repetition of similar sounds at end).
4. Rhythm in the form of onomatopoeic words—this runs into a kind of meaningful vocabulary.

D. For the peculiar emotions and meanings which accompany some sounds.*

(In older children and in adults the same causes operate, but are often cloaked by some more or less sensible reason.)

IV. The child wants to find out what is in books—hence wants to read.

NOTE: Because the social situation soon proves to the ordinary child that books and papers contain desirable material—stories, etc., which his companions have not always time to read or tell him—he becomes possessed by a desire to read, and knowing that this art is taught in school, the five- or six-year-old child urges his parents to let him go to school to learn to read.

A. Now the child's first need is for an eye vocabulary.

1. Meaning and sounds of most of this early vocabulary are well known, hence child needs only to be helped to see relation between forms and meanings.

a. Vocalization an aid at first, and whenever meaning is evanescent.

(1) Permitted when needed.

(2) Child soon led to inhibit vocalization.

(a) To save time by going directly from form to meaning (economy).

(b) To keep from disturbing others (politeness).

(c) Because more discriminating thinking can be done with finer movements as an accompaniment (culture).

2. Certain conventions now become a help.

a. Spelling. b. Phonics.

c. Sentence form—capital to mark beginning and period or question-mark to indicate the end.

d. The conventional use of certain groups of words.

(1) I am, You are, We were, etc.

(2) A boy runs, Boys run, etc.

(3) Come, came, am coming, etc.

(4) By, on, under, etc.

(5) Once upon a time; lived happily ever after.

B. Sharing with others what he has gathered gives the child greater eye fluency but it also leads him to express differences in meaning and hence to think more discriminatingly.

1. A pupil's attempts to make *the picture clear, the meaning carry, the several ideas stand out, the joke appreciated, the emotion felt*, produce variations in and control of *pitch, tone-quality, time, and force*.

NOTE: Work on emphasis, inflection, grouping, pausing, etc., employed for the sake of giving the listener pleasure or knowledge, will eliminate mere word pronouncing as an ideal of reading.

2. The reaction of good oral reading upon silent reading is soon seen in—

a. Love of reading—the acquisition of the reading habit.

* Illustrations in "A Stepdaughter of the Prairie," pp. 7, 15, 98, etc.

- b. The selection of better literature, because more easily appreciated than before.
- c. The use of supplementary or reference material in other school-work.
- 3. The effect is also noted upon oral and written speech—
 - a. In greater freedom.
 - b. In better organization of ideas.
 - c. In sentence structure.
 - d. In vocabulary.

That is, the pupil has something to say, and says it more fluently, coherently, and accurately, than before.

- V. The child wants to write. True, the child does not feel so strongly the social pressure for this mode of expression as he does for oral language, but since it is so important in adult life and yet can be acquired best in childhood, parents and teachers must contrive motives, if natural ones prove insufficient.

A. Natural motives.

- 1. Keeping records of nature-study observations, etc.
- 2. Keeping records of events, recipes, games, etc.
- 3. Writing letters to real absentees.
 - a. Father when away.
 - b. Grandparents.
 - c. A sick schoolmate.
 - d. A doll.
- 4. Real invitations, requests, etc.
- 5. Self-expression. (As in oral language, after a start has been made, children write just for the love of writing, not for communication, especially if they are not ridiculed or repressed.)
 - a. Rhymes—"poetry."
 - b. Stories.
 - c. Plays.
 - d. Puns, jokes, etc.
 - e. Diaries or memory books, etc.

B. Contrived motives which may be made to seem "natural" to the child.

- 1. School seat-work.
- 2. Letters and invitations.
- 3. Note-books.
- 4. Exhibit work.
- 5. Community problems in which each shares.
 - a. A room bulletin.
 - b. A room newspaper or other periodical.
 - c. A room play, etc.

C. Means to be used.

- 1. Necessary.
 - a. Penmanship.
 - b. Spelling.
 - c. Paragraphing.
 - d. Punctuation.
- 2. Valuable.
 - a. Dictionary work (above third grade).
 - b. Much reading.
 - c. Literary interpretation.
 - d. Simple rhetoric—as needed.
 - e. Grammar—as needed.

B.—BEGINNING-READING LESSON-PLANS.

1.—IMPERATIVE-SENTENCE PLAN.

Aim.—To show children that there is (to them) a new method of expressing thought. To help children differentiate the written symbols for at least three thoughts.

Preparation.—(1) Toys and well-known articles on teacher's desk. (2) Children examine these objects and talk about what may be done with each. (3) Children tested to prove that names are known no matter where objects are placed. Teacher may say, Do you think the names of these objects hard to remember? The written names are just as different as the spoken words, and if your eyes are bright, you will make no mistakes in the game we shall play. I am going to tell you to do something with one of these objects. Who wants to do it? All? Then watch.

Development.—(1) The teacher writes on blackboard one action-imperative sentence—perhaps, *Beat the drum*. (2) Can any one do what I have told you to do? If some one can, let him; if no one can, teacher may do, some older child may do, or teacher may whisper the thought to one child, who then does. (Value of each?) (3) Others watch the act performed. Then teacher rewrites the sentence, calling on some one else to do. She may write it four or five times if she thinks it wise to do so. If not necessary, pointing to the sentence already written will answer. (No oral reading. Why?) (4) In a similar way teacher introduces, for example, *Wave the flag*, and *March to the door*, or simply *March*. (5) Teacher now writes any one sentence and child called upon acts the thought. (Leave the "patterns" for a time. Why?) (6) Later erase "patterns" and child responds at sight of familiar form.

Children have discovered that written symbols express thought. If this has aroused interest, the children now desire to master these written symbols which open a wide field of pleasure. These three sentences are probably conquered, and, later, when analyzed, form the basis of many lessons. The teacher may test pupils in many ways—she may act, or may whisper to one child to act, or one child may act whichever story he wishes as another points to the corresponding sentence. The teacher may point to a part of the sentence and say, for example, (if *Beat* is used,) Do this (*beat*) to something else. Touch this (*drum* pointed to). Take something besides this (*flag* pointed to) and (writing or pointing to the word) *wave* it. Play that you have *drums* (written) and *beat* (written) them.

Application.—The above analysis is a form of application, but the pedagogical application is to come in future lessons.

The *word-drill* should be separate from the reading-lesson, since, from the first, we wish the children to feel that reading is a distinct process of thought getting or giving, and should in no way be hampered by the mechanics. Nevertheless, the need of carefully planned word-drills cannot be too strongly emphasized. Unless children have a fairly long list of words which are known instantly at sight, all future work is hindered. These drills should, however, never be conducted at such time nor in such manner as to rob the words of their thought content, for if pronunciation is made the sole aim of the work, the children's future is in great peril, since they will probably become mere word-callers. In a lesson of the sort just discussed, the children might be asked to do whatever the teacher writes, if verbs are being drilled upon; to touch the object, when a noun is written or indicated; to draw pictures beside the nouns written low on blackboard, or to lay pictures or real objects beside them; to lay words (written plainly on cardboard slips) upon the right objects; to do all that it says in the story in which "Run" occurs (*Run to the door*, for example); to watch the words erased and do or show what the words symbolize.

In continuance of this class word-drill, the pupils may for *seat-work* match pictures of flags, drums, boys, etc., with the proper words (written on slips of cardboard); or these words may be arranged to look like the stories on the blackboard. Children may tear or cut or draw pictures to illustrate these stories.

Before leaving this plan of teaching, a few more sentences, excellent for first lessons, are appended:

- | | | |
|-----------------------|-------------|-----------------------|
| 1. Ring the bell. | 9. Hop. | 17. Take three steps. |
| 2. Clap your hands. | 10. Jump. | 18. Go to sleep. |
| 3. Shake your head. | 11. Run. | 19. Jump the rope. |
| 4. Fold your arms. | 12. Sit. | 20. Beat the drum. |
| 5. Wave the flag. | 13. Sing. | 21. Hold the doll. |
| 6. Open the door. | 14. Stand. | 22. Roll the ball. |
| 7. Toss the bean bag. | 15. Laugh. | 23. Blow the whistle. |
| 8. Touch your nose. | 16. Listen. | 24. Read the book. |

(*Query*: Why would it not be well to give both 1 and 22 the first day?)

The following sentences will also throw some light upon how new words are gradually introduced for a month or more, and what the children can finally do:

- | | |
|---|-------------------------|
| 1. Ring the little bell. | 4. Roll the large ball. |
| Ring the large bell. | Roll the largest ball. |
| Ring the bright bell. | Roll the small ball. |
| Ring the silver bell. | Roll the smallest ball. |
| | Roll the rubber ball. |
| 2. Knock on the door (later, the window). | Roll the woolen ball. |
| Look out of the door (later, the window). | Roll the blue ball. |
| Walk to the door (later, the window). | Roll the red ball. |
| Touch the door (later, the window). | 5. Take the ball. |
| | Hide the ball. |
| 3. Hold up your hands. | Find the ball. |
| Raise your hands. | Bring me the ball. |
| You may clap your hands. | Put the ball away. |
| Hold up both hands. | Toss the ball. |
| Hold up one hand. | Bounce the ball. |
| Hold up your right hand. | Throw the ball. |
| Hold up your left hand. | Catch the ball. |
| | Get the ball. |
| | Kick the foot-ball. |

The new words which are thus necessarily introduced may be repeated in still other combinations, thus:

- | | |
|--------------------|---------------------|
| Roll the cylinder. | Throw the bean-bag. |
| Toss the sphere. | Catch the hoop. |

Or, making longer stories.

- Hold the red ball in your left hand.
Touch the wall with both hands.

2.—THE LITTLE RED HEN.*

This *blackboard lesson* uses the story of *The Little Red Hen*, already familiar to pupils through the language hour. Children have pictured the story, acted the parts, and have told it several times. Familiar pictures of the characters are on large cards; script names of the animals are on smaller cards, easily clipped on to the picture-cards, and as easily removed. Several recitation periods are necessary for the entire story. The teacher asks, "Shall we make a reading-lesson of our story, *The Little Red Hen*?" (The children agree, and the teacher writes the heading on the blackboard.)

"About whom is our lesson to be?" (Answers will not be indicated except where the desired answer could not be known.)

"Find the little hen's picture. Put it under the title. What does the title say?"

* This and the remaining plans are based on *Literature*, and are adaptations of observed lessons taught by Miss Helen Ford Staples, Winona.

"What did the little red hen find?" (Teacher writes answer on blackboard: "The little red hen found a seed.")

"What sort of seed was it?" (Teacher writes answer: "It was a wheat-seed.")

"Was she glad? Why? What did she want to do with the seed?" (Teacher writes: "She wanted to plant the seed.") "Why did she want to plant it? Why didn't she eat that seed?" ("It wasn't enough; she wanted more.") Teacher shows a stalk on which is a head of wheat, and asks, "Would one seed, if planted, make a head like this? Let's count the seeds on this stalk." (Teacher counts with children, who incidentally see a need for counting). "Twelve seeds! Then it would pay the little red hen to wait." (Teacher points to the words children know and children say them.)

"Let us read all of our story." The teacher points to the sentences, asking questions similar to those originally asked. She calls on as many pupils as possible. Then she asks a child to take the pointer and show by a sweep the blackboard sentence that tells what the hen found; what sort of seed it was; what she wanted to do with it.

For a rest, the pupils dramatize the story as far as given. "Be a little red hen, James, and scratch around and see whether you can find a seed." If James can't, or is too slow, the teacher sends some other little red hen to scratch—one who *can* find a seed.

"How does she act when she finds the seed? Does she know at once what kind it is? Is she glad when she discovers that it is a wheat-seed? Be the little red hen when she finds the seed, Lucy, and show me how you feel."

"Don't tell me, but be ready to point to and read the story that says what she wanted to do with the seed." (John does.) "Did she decide at once to plant it? What did she say?" (Teacher writes answer, "Who will plant the seed?") "Who answered her? Find their pictures." (As one picture after the other is shown by a child, the teacher attaches to it the card that contains the correct name. "Were these animals ready to work? What sort of pig was he?" (Teacher writes "pig" on blackboard but does not speak the word.) "What did he answer?" (Teacher writes, "*'Not I,' said the pig,*" letting pupils read the known parts as she writes; she supplies the other words.) "What sort of *cat* (from now on the teacher *writes* every word she can for children to say, and writes the same word as often as possible to fix its form) was the *cat*?" "What did the *cat* answer?" ("*'Not I,' said the cat.*")

"Now we have one other animal who lived in the yard with the little red hen. Find his picture. What sort of *dog* was he? (*Lazy.*) What did the dog say to the little red hen?" ("*'Not I,' said the dog.*")

"Who spoke then? What did the *hen* say? ("*I will, then.*") And did she?" (Yes.) Probable end of first recitation.

Suitable seat-work to clinch presented work is assigned; for example, matching words, *hen*, *pig*, etc., with small pictures of these animals; laying pegs to represent wheat on a wheat-stalk; tracing with colored crayons over large script words taken from the story; cutting the story from paper; matching loose hctographed sentences with similar sentences pasted on a card, with space left after each sentence for the loose one.

Second recitation.—The teacher reviews preceding work and has a brief word-drill by some device fitting the story and the children's needs. She then helps pupils recall and think about the next unit in the story. "Now the wheat has grown up. Here it is (show wheat-stalks). What does the *little red hen* (children say, as before, whenever teacher *writes* words) want done next? What does

she ask? Would the *lazy dog* cut it? What did he say? Would the *lazy cat* cut it? What did she say? And, '*Not I, said the pig.* What does the *hen* say then?"

The development of a unit is followed by reading, dramatization, word and phrase drills if needed, and more reading, according to the time available. Seat-work should repeat whatever sort pupils most need, as shown by their preceding work. Perhaps some new forms can be added, such as arranging hectographed sentences on a card so that the card looks like the story on the blackboard. After this has been done several times, so that children are quite proficient in it, the slips may be pasted on to the card and the card used for reading in class and then carried home to be read to mother and father. Or, the sentences may be hectographed with spaces for the important words. These words are on separate slips and are to be inserted in the blank spaces. Children may look at a correct complete copy on a card or on the blackboard.

The several other units of the story may be developed in successive recitations, the number depending upon the needs of the class.

To keep the situations real all through, the children must enter into the experiences dramatically. For example, in the final scene the teacher says: "The wheat flour is ready to be made into bread. All may make bread. Think of the bowl. Are you mixing it well? Are you kneading it, or using a bread-mixer? Which did the hen do? Have you put it into the pan? Is it ready for the oven? Put it into the oven. Now it is done. Take it out. Does it look nice? Would you like to eat it? Who else would? [All the lazy animals.] Who does eat it? What does she say before that?"

3.—THE GINGERBREAD BOY.

This lesson illustrates the use of a hand-made chart. The teacher should have had baked a fine gingerbread boy just like the one described in the story and pictured in whatever primer contains the story, especially if that primer is to be used later. She should also have large, interesting pictures, from some good magazines or advertisements, of the characters in the story—an old man, an old woman, a pig, a cat, a dog, a hen, and a fox. Each should be mounted on a separate sheet. Loose cards containing the printed names of the characters should be available for clipping to or laying beside the pictures as needed.

The entire story, in the form desired by the teacher, should be printed on large sheets of manila paper or tagboard, with the usual primary printing-press sold by all dealers in primary supplies. (All this can be prepared in the summer vacation.) Besides the complete story, now to be spoken of as the "chart," the teacher should make two extra sets, printed in such a way that of the first the sentences can be cut apart and in the second the sentences can easily be cut into words and phrases as will be seen to be necessary.

It will also be well to have in smaller type, printed sentences and words needed for seat-work. If the teacher hasn't a small press (bought at any ten-cent-store for ten or fifteen cents), she may find the Congdon gummed words valuable.

The teacher begins by showing the pupils the chart (about five sheets) and the pictures of the characters. She then tells the story exactly as it appears on the chart, embellishing wherever necessary by showing pictures, having pupils relate their own experiences which these recall, etc. As she tells the story, she points to the chart sentences (not words) in sweeping movements. Perhaps the

first telling will occupy all of one recitation. She plans each time to stop at the natural end of a unit. The second day she retells the story, pointing as before, but asking pupils to help "read" wherever they remember what was said or described. This is interspersed with dramatizations to get the feeling of the experiences, and the sequence of thought. Seat-work to accentuate this sequence and to keep alive the interest and the emotional attitudes should be given.

By the end of the third recitation certain phrases and sentences will have been repeated often enough to begin to be recognized by pupils. The first page only may be reread. The duplicate page may be set up beside the original. On the new page the children may point to the lines as the teacher or some child reads them from the original copy.

The teacher then takes big scissors, and, before the children, cuts the second card into sentences. They are then laid beside the uncut-card sentences to see which one is like another. When similar ones are found, they are read aloud—the one on the chart known by its location in the story, the one on the card because it is like the chart one. To match and read the other sentences will be counted great fun. The chart page becomes a dictionary of reference only, and children enjoy reading the card sentences.

Reading from memory, dramatizing, drill, and seat-work, are parts of each recitation. The seat-work must be with print also, and if the teacher can't have some sheets of the same story in smaller type, she should let the seat-work emphasize other lines of work than recognition of form, until she comes to her cut-up sentences and words.

The remaining pages of the chart should be similarly treated, each being easier than the preceding, as familiar phrases become better known.

The teacher calls attention to form only when such knowledge will help the thought. "*He means the gingerbread boy; find another he.*" "Can you tell whether a *man* or a *woman* speaks the next time?" "*I stands up straight and tall. The gingerbread boy feels tall when he boasts of how he can run away from everybody. The cat carries her tail up, as most cats do, in fact.*"

The teacher works also to secure the children's complete participation in the experiences. "Each animal wants to eat the gingerbread boy. Would you like to eat him? Does he look good to eat? Take a bite (pretend); does it taste good? Now we need an old woman. Be the old woman. Who will take the part of the little old man? Be little. Be old. He has helped many people. Now he needs help. He wishes he had a boy. Why can the gingerbread boy outrun the old man and the old woman?"

After full sentences have been read, the sentences can be cut up into words and phrases to be matched with those in sentences, as sentences were matched with the chart.

At this point the seat-work can consist of building sentences from words; of "cutting" the characters and matching them with words; of arranging the characters in order as they pursued the gingerbread boy, either represented by words or pictures or both; or of any of the suggestions given before that are still usable.

The chart with its pictures should be kept intact for use in reviews or whenever children forget some words learned there in context.

After the vocabulary has been mastered, the cut-up words can be used to rebuild a slightly changed form of telling the story; but, though the form be changed, the sequence of thought must be kept the same.

The reading of this newly arranged old material is also fine review.

4.—THE KEY TO THE KING'S GARDEN.

NOTE: The treatment of each of these lessons is for beginning pupils. Adaptations of the plans must be made if they are used later in the year. Some teachers do not have text-books enough to permit their use from the beginning, in which case blackboard and chart lessons will make book work comparatively easy. The following lesson is meant for pupils who have been in school only a few days and are given the book for at least one reading recitation a day. If possible there should be several short reading periods daily, some of which can be devoted to "direct-experience" lessons and others to literature lessons. Of course these lessons are merely suggestive and are not the only good stories to be used.

The teacher puts pupils into the atmosphere of the story, which they have heard told, as was the plan in the preceding lessons. She questions as to pictures seen when she mentions *king, palace, queen, king's garden, key, gate*; but she does nothing of word teaching, choosing to let pupils first get their words from the book.

Books are passed and children are shown a book open at the first picture. "Find the same picture—that of a man who discovers a key. Who'll be first to find the place? Now lay these bookmarks (strips of stiff paper) on the page just under the picture. As some one reads, move your bookmarks down to keep the place; I shall watch to see who do this and so follow the reading."

"What does the man see? What does he say? Was he glad? Make me know just how glad he was! [Children read (that is, repeat from memory) *The key! The key to the king's garden!*] Perhaps the key has been lost a long time, and every body is glad that it is found. All show how glad you are (moving your bookmarks down as you read)!"

Teacher shows a card on which the word *key* is printed, saying, "Here is the *key*. Pretend to unlock the door with it. Is there anything by which we can remember *key*? (Children can't think of anything, so the teacher suggests that *k* looks something like a *key*, with its stem and its notches.) Put your bookmarks under a *key* in the book. Under another *key*. Whose key was this? What did it unlock? (Teacher shows card with word *garden* on it.) Is there anything to help us?" A child suggests that the word looks like a garden with flowers in it, one tall flower. Teacher accepts, though the likeness isn't striking. Several children are now called on to read the whole page, others moving bookmarks down. (This teaches children that the story is on the page and can be followed, though of course no child is studying the words.)

"Turn the page. What is the man doing here? I would like a man who sells things on the street. Leslie, be the man. What have you to sell? [Potatoes.] Call so I can hear you, though I'm in the house. What do you charge? I'll take some. Let's hear another man. Frank!" (I sell apples! At five cents a peck! Apples! Apples!) "Good. I can hear that, and your apples are very cheap. I'll take a peck." The teacher secures just enough responses to get pupils into the atmosphere of selling and calling out the articles for sale, then turns to the book again. "What is the man selling?" The teacher now adds a card containing the word *sell*. "Who'll be the man? What must you have in your hand? Find it. [Child selects *key* from the cardboard words.] Now cry it for sale." (Child reads, "I sell the key to the King's garden!") Other children cry it. At last the teacher says, "I'd like to buy it. What do you charge?"

"Find *key, garden, sell*." The teacher adds the card containing *king's*, and again has children find words as she calls for them—words laid face up on the floor or stood on the blackboard ledge where all can see. As the words are found the teacher pins them to a stiff cardboard or bulletin-board which stands near her.

"Look at the next picture. Recall the story. What is for sale this time?" (Answer, "*The string that held the key.*") The teacher adds card with word

string on it to others on the bulletin-board and suggests that *string* can be remembered because the first letter looks like a piece of string, and the last letter is also a sort of curly string. All words, quickly pointed to, to be named by children.

"Who is ready to be the saleswoman on this page?" Several children in turn, act and read, "*I sell the string that held the key to the king's garden!*" while others move their bookmarks down. The teacher commends those who do, saying she sees who are *reading*.

"Make the people at work in the kitchen hear you." (Motive for clear calling of the wares.) Probable end of first recitation. Seat-work to fit the lesson follows. See suggestions in lessons above and on pp. 283-292.

As the remainder of the story is taken up in succeeding recitations, the teacher helps children get cues for the idea-words, has dramatization of the parts to create reality, urges constant following of the book until pupils actually do read from the book and do not merely repeat the story from memory, gives word-drill sufficient to fix the needed words, and plans seat-work to make vivid the experiences. In daily recitations, she holds pupils to reading *what the book says*, not just what it means, giving as one motive, "Read just what the book says, so you can play it right," and as another, "I'll know that you are *reading* if you use just the words in the book."

C.—READING-PLANS FOR OLDER GRADES.

1.—LESSONS FROM "VIKING TALES."* (Third Grade.)

(As taught by MISS FRANCES M. SMITH, Minneapolis.)

NOTE: Parts only of several lessons are given, because of lack of space. These parts show, in general, thought methods of teaching reading; and, in particular, the following points: (1) That the setting of good specific aims is the best means of holding pupils a long time on a bit of subject-matter without loss of interest; (2) that children can find central ideas and name them; (3) that execution is the finest sort of check on correct thinking; (4) that children can supplement thought; and (5) that symbol calling can be controlled by the thinking.

First illustration, from a lesson on pp. 32-34.—The following specific aims were set during two twenty-minute recitations:

(1) Have you a picture of this farmer's house? Where can you get it? (Last few lines on p. 32 and on to p. 33.) Get picture of just how the farmer's house looked. (Children read silently.)

(2) Make a floor-plan of the house on the blackboard. (One child drew a straight line on the blackboard, with benches, fire place in middle, and more benches, shown in one row.) Children criticized plan, by asking of the maker, "How many sides to this house?"

Does the book help us to know whether the benches were on only one side? (Top of p. 33.) Teacher then asked, "Would you still leave it this way?" (Child re-drew it.)

(3) Where shall we put the door? (A boy finds that the lines say, "The thralls looked down the feast hall.")

(4) Find a name for pp. 32-34. (Several given; all good; the one selected by the class was, "What Olaf and his Men Did at the Farmer's House.") (This aim demanded rapid reading of these pages.)

(5) Turn back to p. 33. Begin at "Ho, thralls!" and stop at the beginning of the last paragraph. What were the men doing here? (Joking. Making fun of the farmer.)

* By Jennie Hall, Rand-McNally, Chicago.

(6) They were doing something else at the same time. Find out. (Waiting for supper. Warming themselves.)

(7) Let us act that part. What must we know first? (How many people we need. Find out.) (As children answered they were asked to prove the answers by the book; for example, one child said "twelve thralls." Others thought she was wrong, since the book says, "A dozen people" sat on the bench. The first child read, "'Ho, thralls!' I called to *them*," as proof that the "people" were "thralls"; and "Off *they* ran," as a further verification of her idea.)

(8) How many men are going to talk? (Proved by reading aloud.)

(9) After Katherine, who was told to do so, had selected the characters to talk and to act, the teacher said, "Now read to be sure each of you knows what to do and to say!"

(10) To the child who is to be the farmer, "What is especially important about your part?" (To let my face show how surprised I am.) "Yes, and your other feelings, too. See what they are. I shall watch your face as you act, to find out just how you feel."

(11) After the acting and various criticisms on it have been given, "Who can tease the farmer more?" (Children supplement the thought and tease in the way they think the Vikings did.)

(12) Just what things did Olaf and his men do? (A summary called for: Demanded entrance. Ordered thralls about. Joked or teased the farmer. Warmed themselves. Waited for supper. Ate and drank.)

Second illustration, from a lesson on pp. 69-70.—*A few of the directions in the assignment*: Be ready to name the first half of p. 70. Be ready to name the second half of p. 70. Be ready to dramatize p. 70. Tell what you think Harald's runes might have said. Make up a joke that you think these Vikings might have thought funny.

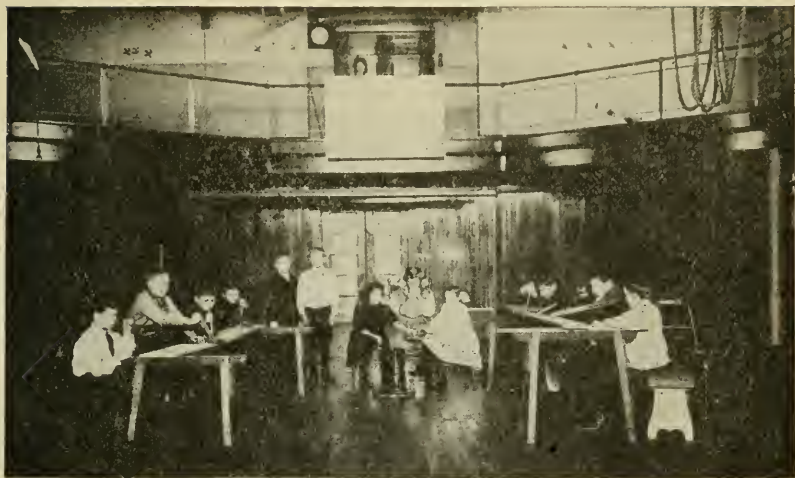
Two examples of correcting form by thought, calling no attention to the particular words miscalled: A child read, "Leaped up the dirt." "Does that make sense? What do you see him doing?" (Making the dirt into a mound.) "Show us that." (Child re-read it correctly.)

Another child read, "They divided the spoils into two piles." (He read "two" when the book said "four.") The teacher said, "Frank read one thing that couldn't have been true according to what follows. How many people received piles of spoils, Frank? Read to show us."

Third illustration, from a lesson on pp. 95-99.—To show the number of specific aims set: (1) "We are ready for a new chapter; what is its name?" (Harald Goes West Over Seas.) "What will this chapter tell us, then?" (Where Harald went.) (2) "Read to the place where Harald really goes. Where does he go? What is all this about?" (The reasons for his going.) (3) "Read the first long paragraph on p. 95, and get just the first reason." (4) "Read again to see whether there are any reasons you do not understand." (Some discussed.) (5) "Read aloud and make me feel why they wanted to leave." (6) Read to find out just where they went."

Fourth illustration, from an "Assembly."—*Dramatization of pp. 15-61.*

Pictures 1, 2, 3, illustrate a play which the B-4 class gave, the play being based upon work done in the reading-class. The name of the play was, "Harald Made King." Harald was the son of a Viking king named Halfdan. After Halfdan's death, Harald held a funeral-feast at which he took a king's vow and became king.



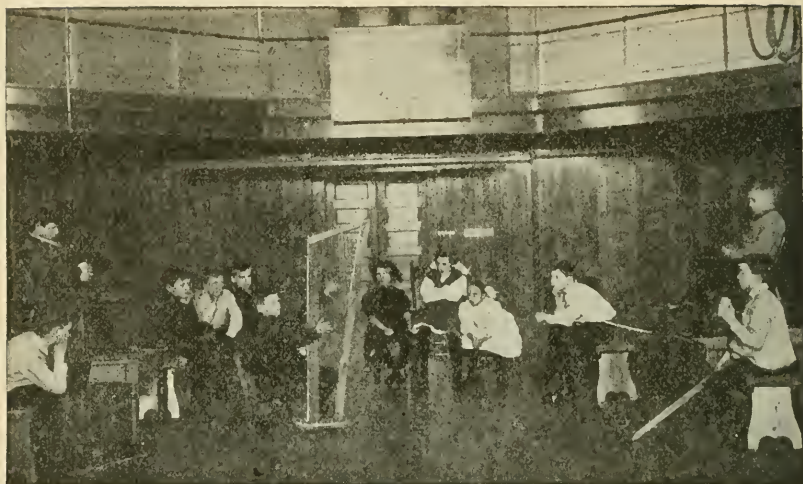
1. EATING IN THE DAYS OF THE VIKINGS.

Picture 1 illustrates the method of eating in the time of the Vikings. The gymnasium stools represent the long backless benches which Vikings used. The trestles and boards represent the tables of those times. Big trays and platters, swords and daggers, were the fashionable dishes.



2. KING HARALD, THE VIKING, TAKING OATH TO SUBDUE HIS FATHER'S ENEMIES.

Picture 2. Harald has just ordered his tables removed and the mead-horns to be passed. He is now making a king's vow, and his subjects are listening with much interest, ready to drink his health as soon as he finishes.



3. THE SKALD SINGING THE PRAISES OF KING HALFDAN, THE FATHER OF HARALD THE VIKING.

Picture 3. Harald has finished making his vow. He has now taken the king's high seat which shows he is king. The skald, wishing to please the king, is singing of Harald's father, King Halfdan.

While the thralls removed the tables after the feast, the men told funny stories to entertain one another. At the end of each story the Viking men applauded and showed their appreciation by loud laughter.

Since the reader which the children used did not give any of the stories which the men told, it left the field open to the children to imagine what stories were told. The aim, then, was for the children to tell any story which their fancy led them to tell, so long as it was in harmony with Viking life.

The following are some of the stories which were invented:

Basil B.'s story: When I started out for the feast I started out in my ship and the ship wouldn't go, so I started out with my horse. Then my horse wouldn't go, so I had to buy another horse. When I got half way to the feast the horse heard me say something about mead. He stopped and I guessed he wanted some mead. So I got off and made a horn full of mead and gave it to him. That's the reason why Audbiorn and I came late to the feast. [Applause and loud laughter.]

Sylvester R.'s story: Well, I'll tell you a story of what happened to me once. I was fishing over in that 200-foot river one day and had my feet hanging over the edge of the boat and had one of those pine-tree branches for my fish pole and a piece of skin for my line. I was lying there taking it easy and something gave a little jerk. Then I pulled hard and up came a great big snake with a large head. He grabbed me right in the ankle and I hung there for a while and he nearly pulled me out of the boat, only I grabbed my dagger and stabbed him right in the head. I gave my foot a little jerk and threw him right back in the water and there's only a little scar there where he bit me. [Applause and loud laughs.]

Gaylord G.'s story: I'd just made my spear, Foesfear. I went in the blacksmith-shop and I made my spear-head. Then I didn't have a shaft, so I put on my skis and started off for the woods. I was going down here and I jumped across that 200-foot river, that you were talking about and when I got across I saw a huge rock across there, and going up to it I saw an ash tree on top. I jumped off my skis and started to climb up the ragged edge and tore my cloak a little bit. When I got to the top I cut down the ash tree and trimmed it off. Then I threw my ash trunk down the rock and started to climb down. Then when I got near the bottom I jumped. Just then a wolf sprang out from the thicket and I snatched my pole. Swinging it around my head, I was trying to hit the wolf, but just as the pole got on the opposite side from the wolf, he sprang at me and got me by the wrist. Just then I happened to think of Foesfear and I ran it into his

head. I threw the wolf back into the woods. Putting on my skis, I started off home. When I got home Olaf was there in the shop and he asked me what was the matter with my wrist. I told him it was nothing but a little wolf scratch. This is all the scar there is left. [Applause, as before.]

The following are some greetings which the little girls invented as they took the part of the Viking women and passed the mead horns:

To the king: "Drink this; it will give you a better voice to make your vow."

To the skald: "Drink this mead; it will give you a better tune to sing your song."

To a visitor: "Mead is good for a strong and healthy man."

George A., who took the part of the skald, invented his tune (a sort of chant) and the following words for his song: King Halfdan was a brave man. He fought in many battles and won every one. He had a strong arm, a heavy shield and a strong sword, and a strong mail-coat, and a gold helmet. It was too bad he had to die, for every man loved him. All the kings were scared of him because he had such a strong arm. He had the best horse in his army and every man loved him because he was so brave. He was open handed and made many vows and all his vows were the truth. He had a strong arm and a big shield. It was too bad he had to die, because every man loved him.

2.—A FIFTH-GRADE LESSON.

THE COAST-GUARD.

Do you ask me what I am seeing
While I watch the embers glow,
And list to the wild wind howling
As it drives the winter snow?
I see, away to the eastward,
The line of a storm-beat coast,
And I hear the tread of the hurrying waves,
Like the tramp of a mailed host.

And up and down in the darkness,
And over the frozen sand,
I hear the men of the coast-guard
Pacing along the strand,—
Beaten by storm and tempest,
And drenched by the pelting rain,—
From the shores of Carolina
To the wind-swept bays of Maine.

No matter what storms are raging,
No matter how wild the night,
The gleam of their swinging lanterns
Shines out with a friendly light.
And many a shipwrecked sailor
Thanks God with his gasping breath,
For the sturdy arms of the surfmen
That drew him away from death.

And so, when the wind is wailing,
And the air grows dim with sleet,
I think of the fearless watchers
Pacing along their beat.
I think of a wreck, fast breaking
In the surf of a rocky shore,
And the life-boat leaping onward
To the stroke of the bending oar.

I hear the shouts of the sailors,
 The boom of the frozen sail,
 And the crack of the icy halcyards
 Straining against the gale.
 "Courage!" the captain trumpets,
 "They are sending help from land!"
 God bless the men of the coast-guard
 And hold their lives in His hand!

—Emily Huntington Miller.

I. SUBJECT-MATTER.

(This poem was selected because a teacher of some experience asked the writer in a rather despairing tone, what *could* be done with such material.)

A. *Aim*, or *Aims*: (1) To help pupils know what experiences come to other people; (2) to help them recognize bravery, courage, faithfulness to duty, etc.; (3) to rejoice in just reward; (4) to help them see how scenes frequently witnessed may be preserved in word-pictures; (5) to help pupils become brave themselves by growing to appreciate what heroes do for us; and (6) to help pupils express a poet's thought—read well orally.

B. *Organization of Subject-Matter*: This poem, written by an author who had the same appreciation we all feel for bravery, and who had the added power of fine expression, may be divided into three main parts:

1. Lines 1-4. Introduction. Why or how author is reminded of the scene.
2. Lines 5-38. Description of sights often witnessed on seashore.
 - a. A tempestuous night.
 - b. Coast-guards pacing the strand (stanza 2).
 - c. Coast-guards rescuing shipwrecked sailors in face of great danger (stanza 3).
 - d. Tempest on land should remind us of worse tempest on coast; wreck described (stanzas 4 and 5).

3. Lines 39-40. Conclusion. Prayer for blessing on coast-guard.

C. *Preparation of Material*.

1. Of such as will be used *if necessary* during development: A map of the Atlantic seaboard; some pictures of wrecks; pictures of ships, so that different parts can be recognized; pictures of coast-guards in their work; pictures of waves in a storm.
2. Of suggestions for preliminary assignments from which teacher must select what her individual class most needs (no class must be given all):

a. To help children get the *larger thoughts*—

1. Read the poem through to find:
 What it is about. Where the story is located. What different characters are mentioned. How the different characters act, dress, etc. What season of the year it is.
2. Think about the story and try to tell:
 Why the author saw such pictures. Why the author pictures such a scene to us. Why the work described is a noble one. (Do you believe it is?) Why God is asked to bless these men.

b. To help children get *word* content, *word* value, and *word* pronunciation.

1. With your books open, find and think over the meaning of the following words and expressions:

The embers glow. As it drives the snow. Tread of waves. (Why use "tread?") A mailed host. The coast-guard. Drenched by rain. (Who or what were?) Wind-swept bays. Friendly light. (Why is "friendly" a good word?) Gasping breath. Sturdy arms. Surfmen. Drew his men from death. Wind is wailing. Air grows dim. (Why?) Fearless watchers. (Why "fearless"?) Pacing. Beat—Note the fourth line of second stanza; of fourth stanza; what difference in words? In thought? Surf. Rocky shore. (Why is "rocky" consistent here?) Life-boat. Bending oar. (Why?) The captain trumpets. Halyards. Boom of frozen sail. Hold their lives in his hand.

c. To help children get images.

1. Indicate all the lines in which you can find pictures that might be painted. Indicate the lines in which are scenes that might be acted; situations that might be described.
2. Or reverse this (at least in part) by asking children to draw pictures; to be ready to act pictures; to try to describe pictures found in lines 2, 3-4, 5-6, 9-14, latter half of 18, 19-20 added to 9-14, 21-22, 23-24, 26, 27-28 added to 9-14 and 19-20, 29, 31-32, 33, 34-36, 37-38.

II. METHOD.

A. *Aim* (specific) may be one or all of the following, if it differs at all from aim of subject-matter division:

1. To help children recognize how hard it is to do one's duty, and how much we admire those who are faithful in spite of discomforts and danger.
2. To relate experiences in our own lives to situations in the poem.
3. To recognize the words and be able to read (aloud) the poem with thoughtful expression—to give others the meaning.

B. *Preparation*: Of children's minds (the assignment having been made before and the children having studied the lesson):

1. Did you find many pictures in today's lesson? Read the lines you selected, Albert. Hold up the picture you made, Marian, and let the class find the lines to fit it. (Marian, allowed to call on a child to read, approves or disapproves the selection.)
2. Did you find any hard words? Can you pronounce them? Teacher writes one by one and calls on some child each time to pronounce the one last written:

mailed host	drenched	sturdy	halyards
embers	gasping	surfmen	wailing

If any stumble, teacher calls on several, at the same time asking for the content of each word. Recall a few questions under *b* of assignment.

3. Which of the questions under *a* in the assignment did you like best? Answer it. Which did you find hardest? Answer that. (Or, teacher may recall any or all she deems necessary.)

C. *Development*:

1. If preparation hasn't made thought clear, teacher must help more here. Show materials collected, etc.

2. If thought *is* clear, and words are so well known that oral reading will not be hampered, the teacher has left only the problem of arousing the children's emotion, so that the oral reading will be done with feeling and consequent good expression. To do this the following thoughts must be brought out clearly in relation to children's own experiences:

- a. Guarding—sheep by shepherds; town by policemen; sick people by nurses; ocean travelers by these coast-guards.
- b. Winter fireside—if children have never seen pictures in the embers, they may have done so in the summer clouds, or in the smoke. Howling winds bring what thoughts to the author? Why?
- c. Seashore—recall it as seen by children in summer; waves; their height, movement, frequency; imagine it in winter. If never seen, recall what *is* known—lake-shore, pond, river, creek, tub of water agitated. Rocky shore—bluffs, etc.
- d. Wreck—train wreck; tornado, hurricane, or cyclone and its effects; lightning striking; ships, frozen sail, halyards, captain trumpets (why?); make picture clear.
- e. Bravery—courage—faithfulness to duty in the face of discomfort, drenching rain, pelting sleet, raging storms. If children know story of the leak in the dyke, or of the picket guards in war, or stories of colonial children, some may here be recalled briefly. What made men's arms "sturdy"? Why are "fearless," "wakeful," and "humane" good words to use?
- f. Make children *feel*—

The fearful season.	The relief of the sailors and travelers.
The bad night.	The deserved blessing for duty faithfully done.
The heroic acts.	

3. Oral reading by as many pupils as possible, criticising only the bringing out of the thought—giving pronunciations where necessary, so as not to impede expression or thought. Questions should be of this nature: Is that picture clear to us? Can John make it clearer? Julius, try again to make us see it. Is that what it means to you, Lulu? Why didn't he make it stand out? Did Mary read that better than she read yesterday? Were all the points brought out? Ray, show us what points you got that Arthur didn't emphasize. What is the *biggest* thought in those lines? Can you make it *seem* the biggest? Do you really feel it? Then show us. Do you believe it? I'd never guess it from your reading. Try again.

- D. *Application*: No immediate application is necessary, yet the teacher *could* make this the basis of painting lessons—letting pupils paint different pictures to illustrate the various lines. Or, pupils may cut out and carefully mount suitable pictures for this purpose. She might also use the copying of the poem for penmanship lessons; the committing it for language lessons; the hard words in it for spelling lessons; and all might then be applied to a class "booklet" showing the poem in its entirety, followed by single lines on the pictures illustrating them.

The teacher should also take pains to use often in school work the thought of perseverance or faithfulness to duty in the face of discom-

forts, saying, for illustration: You wouldn't (or would) make a good coast-guard. Why? Suppose the *coast-guards* had given up because it was *hard*! Are *you* going to give up? The words learned will come up and be referred to in many future lessons.

D.—AIDS IN LANGUAGE AND COMPOSITION.

1.—FIFTH-GRADE WORK UPON ONE USE OF THE APOSTROPHE.

I. SUBJECT-MATTER (of the lesson-unit).

A. *Aim or Need*: To express in concise written form the fact of ownership. (School-room conditions make it necessary to subdivide the lesson-unit into several recitation periods, each of which will have a sub-aim of its own.)

Sub-aims:

1. To express the fact of ownership by an individual. (A study of the child's needs makes us exclude any mention of such exceptions as Moses', Jesus', for conscience' sake, etc., but simply to develop the invariable rule: Add 's.)
2. To see how plurals are formed. (Usually by adding *s* or *es*, but also in several other ways.)
3. To give plural nouns the genitive form. (Done by adding 's, or just '.)
4. To learn how to express exactly what is wished said in correct genitive form. (Learned by careful study of the thought first expressed in phrase form.)
5. To gain mechanical skill in using the facts learned. (Done by daily applications in other lessons, by seat-work, tests, and drills.)

B. *Organization of Subject-Matter to Meet this Need or Aim*:

Our ancestors felt this need and satisfied it by the invention of the genitive form, which is characterized by the use of the apostrophe with nouns, and by inflected case-forms for pronouns. The following points illustrate the problem and its solution:

The phrase, *John's hat*, says concisely the same thing as *John owns a hat*, or *John has a hat*. So long as the race confined itself to oral expression, no apostrophe or other "sign of possession" was necessary, but as soon as thoughts needed to be put into writing, confusion must naturally have arisen. For example, in the expression, *The boys play*, the reader could not know whether the error was a failure to place a period after *play*, or a failure to finish the sentence—*The boys' play is worth watching*. The form may have developed through the abbreviation of *his* or *has*, and is, consequently, only a further application of the use of the apostrophe in contractions. Illustrations: The girl'(ha)s (a) doll. John Smith'(hi)s book (found even within the last fifty years).

As the use of written expression became more general, different forms for singular and plural nouns had to be invented. Then, as euphony entered, exceptions arose, until now the most reliable authorities give the following principles:

1. All singular nouns are made genitive by adding an apostrophe and *s*.
 - a. Euphony has excepted from this rule words or phrases containing several hissing sounds, namely, Jesus, Xerxes, Moses, for conscience' sake, for goodness' sake, etc.

- b. But the best usage does not sanction this change for only one *s* sound. Write James's book, the countess's ball, etc.
2. Plural nouns must be separated into two groups:
 - a. Those which end in *s* and add only the apostrophe to become genitive.
 - b. Those which do not end in *s* and add both the apostrophe and *s*. Proper nouns are seldom made plural, much less plural genitive, and when they are so used the phrase form is the better one to use. Illustration: "The happiness of the three Helens is now complete," in preference to, "The three Helens' happiness is complete."
3. When there is any doubt whether a noun should be used as singular or as plural genitive, transpose the expression to the phrase form, thus:

The Hall for Students—should be, The Students' Hall.
 The house for my doll—should be, My doll's house.
 The work of one week—should be, A week's work.
 A drill of ten minutes—should be, A ten minutes' drill.

Cautions.—To avoid confusion, emphasis must also be placed upon some points which are only slightly related to these three principles.

1. Pronouns have their own genitive-case forms and need no apostrophe. *Its* (not *it's*) home is in the mountain. One must here note that *it's*, the contraction, is to be studied under another topic.
 2. Simple plurals of nouns never have the apostrophe. The girl wears twos (not two's). I have used four ands (not and's). I went to visit the Smiths (not Smith's).
 3. Letters, marks, and figures, however, form their simple plurals by adding *'s*. One writes 6 a's; four +'s; five 9's, etc., but not five nine's. (See preceding paragraph.)
- C. *Material* (other than subject-matter) to be used in the series of recitations necessary to teach this lesson:

1. Forms of applications and assignments from which to choose:
 - a. Children are given lists of words to be changed to genitive form and to be followed by names of articles which might be owned:
 1. Of only singular nouns.
 2. Of plurals not ending in *s*.
 3. Of plurals ending in *s*.
 4. Of all three classes given miscellaneously.
 - b. Complete sentences called for, these sentences to use given words in genitive form.
 - c. Children asked to supply blanks in the following sentences, which have been selected because *thought* is necessary to see whether singular or plural genitives are to be supplied:
 1. The New Foundland dog ... body is large.
 2. The girl.... mothers were not at home.
 3. The child.... love for their teacher was plain.
 4. The dress.... color was a lovely blue.
 5. The boy.... cap was torn.
 6. Both the shoe.... buttons were gone.
 7. The class.... behavior was perfect.
 8. The goose.... feathers are soft.
 9. The wom.... husbands went to war.

10. The "Minute M...." love of country made them brave fighters.
 11. My kni... blades were all broken.
 12. The doll... hair came off.
 13. The grass... green.
Can now be seen.
 14. Many turkey... wings were used in brushing Pilgrim... hearths.
 15. The book.... tenth page is torn.
 16. The bus ... driver was hurt.
 17. For pity.... sake, help me in this affair!
 18. The magnet... power of attraction makes it useful to man.
 19. Lamb.... wool is used for many things.
 20. The pupil... last holiday was April 2.
- d. After repeated drills, put with the genitive forms some simple plurals to be supplied, because, after learning the genitive form, children are inclined to use the apostrophe for mere plurals where no thought of ownership enters, *e. g.*:
1. The boy.... like Washington.
 2. February 14 is St. Valentine.... day.
 3. Boy.... like that day.
 4. I saw one child.... valentine.
 5. The heart.... on it were red.
 6. Six boy.... came to school.
 7. One boy.... hat was torn.
 8. Another boy.... book was soiled.
 9. The other boy.... felt sorry.
 10. No child.... were absent Monday.
 11. The teacher.... desk is oak.
 12. The flower.... on her desk look fresh.
 13. Their petal.... are pink.
 14. The flower.... fragrance is delightful.
- e. Sentences selected from history stories so that immediate application to other lessons may be made. These may be given in incorrect form to be made right:
1. Pharaoh commanded all the Israelites children to be killed.
 2. Miriam was Aarons sister.
 3. Pharaohs daughter found Moses on the rivers bank.
 4. Moses obeyed Gods commandments.
 5. He met Jethros daughters at a well.
 6. The Israelites obtained Pharaohs permission.
 7. The Red Seas waters were parted for them to pass through.
- f. Children may each find five examples of the use of the apostrophe in any of their text-books. Copy the five sentences and be ready tomorrow to read them and tell why the apostrophe is placed as it is in each case.
- g. Dictation of a story employing as many genitives as possible.
- h. Applications can be made in every succeeding lesson by calling for the reason (or rule) whenever a genitive is noted.

2. Materials and objects to have in class: Such as are needed to make meaning clear, *e. g.*, a piece of lambskin with wool on it, and a slipper-sole with lambs'-wool lining.

II.—METHOD.—(Divided into recitation units, but not of necessity to be given on consecutive days. In fact, a fortnight between some would produce better results.)

First Recitation: The use of the apostrophe with singular nouns.

A. *Preparation.*—(To arouse the child's feeling of need, and to find what possible past knowledge he has to aid him in satisfying this.) The teacher has on the board these or similar words:

boy	turkey	gas	cork	Helen	eye
man	sheep	dress	girl	string	ox
child	Charles	Willie	church	class	glass
rose	table	woman	deer	moss	bus
shoe	book	wolf	goose	James	pencil
dog	foot	picture	mouse	knife	lady

The children are asked to study the words for a few minutes to be sure all are known. Then the teacher questions after this fashion:

1. *How many* does this signify? This one? (Pointing.) Look through the list and see *how many* each word signifies.
2. Do you know the meaning of ownership, or possession? Who can suggest something that a *boy* may own? That a *shoe* may have? That a *table* may possess? (Derive such sentences as "The boy has a knife," "The shoe has a tongue," "The table has a leg.")
3. These same things can be told in fewer words. Can any one think of a short way to tell me that the table has a leg? (The table's leg.) Give several others.
4. Have any of you ever seen such a phrase written? Can you write it? (If a child can, continue.) What is that little mark which you have made called? Where did you place it?

B. *Development:*

1. If the children's previous knowledge has made clear the proper placing of the apostrophe, the teacher needs only to drill and to give opportunity to all pupils to show their grasp of the fact. If it can not be derived from the past experience of the class, the teacher must give the form herself, since no amount of thinking could produce the correct solution to this problem.
2. When the correct form has been presented, in one way or another, the teacher continues: Some one may tell me (write) in the shortest way possible that *the boy has a cap*, *the dog has a bone*, etc. Tell me anything you wish that the *turkey has*, the *ox*, etc. Take any object or person named in our list, think of something which that object or person may have, and tell us in the shortest possible way. Do this several times.
3. What have you done in every case? (Added 's.) Why did you do it? (To show ownership.) Why was something of the sort necessary? (To prevent confusion with simple plurals.) How do you think the apostrophe came to be chosen? (In contractions.) Illustrate. Do you think this form (table's) is any sort of contraction? (See Organization of Subject-Matter, p. 245.)

4. Now let us see what we have learned today. What sort of words have we had? (Nouns meaning only one.) Have we treated all exactly alike? Then how shall we explain what we have learned to do? (Some expression of the rule or principle derived, but the expression must not be forced into any stereotyped form until the impression (or feeling) is sufficiently strong to demand it, even if left for a week.

C. *Application*.—(See full list, one of which will be chosen, *e. g.*, use (1) singular nouns, under *a*, under 1.)

Second Recitation: The Study of Plurals.

(We cannot here take time to teach all the rules for forming plurals of nouns, but will, instead, take simple nouns, the plurals of which are already known by the children. These plurals we shall classify into very general classes. Probably, too, the terms "singular" and "plural" will need to be taught as the briefest means of expressing the thought of "one," and of "more than one.")

A. *Preparation*:

1. The list of words used yesterday to be on the blackboard.
2. Review yesterday's work. What did we do to these words yesterday? What is the sign of ownership or possession? Write the word "apostrophe"; make the sign. Where is it placed in the genitive form of each of these? Write on blackboard the new term, "genitive," explaining that it is the name of the form employed to show ownership, and other things to be learned later. Make any two words genitive and put them into sentences.
3. Prepare for advance. Do you know what I mean by such expressions as these? (Teacher writes on blackboard): He is a very *singular* man. That was the most *singular* story I ever heard. You are a *singular* boy. (The children ought to feel that *singular* means "one of a kind," so that when we call these words *singular* nouns, the same thought of "oneness" is appreciated.) Name some more singular nouns.
4. Do you know what we call nouns that mean more than one? (If no one does, the teacher teaches the name, "plurals.")

B. *Development*:

1. Let us make all the words in our list plural. (Children do this. During the process they will find that "proper nouns" are seldom made plural, and why this is true.)
2. How many classes do we find? Three, namely: a. Proper nouns seldom made plural. b. Plurals ending in *s*. c. Plurals not ending in *s*.

Let us mark the three classes with three different colors of crayon. *John* may mark all the proper nouns; *Mary* those ending in *s*; and *James* those not ending in *s*. *Lulu* may copy the first list in order on this board; *Jane* may copy the second list, and *George* the third.

3. Now let us see what we have learned today (a. Nouns which mean but one are called singular nouns. b. Those which mean more than one are called plural nouns. c. Proper nouns are seldom made plural. d. There are two main classes of plural nouns—those which end in *s*, and those which do not end in *s*.)

C. *Application*: Tomorrow we shall learn how to make these plural nouns genitive in form. For study, I shall ask you to fill blanks in some sen-

tences. Sometimes you will need to use the singular genitive and sometimes the simple plural. Try to get all correct. (The assignment will be a combination of b and c under full list of applications.)

Third Recitation: The formation of Plural Genitives.

A. *Preparation:*

1. Review of work of preceding days: What are nouns? What are singular nouns? What are plural nouns? How do we make singular nouns show ownership; that is, assume the genitive form?
2. Arouse the need for the plural genitive: Do we own things in common? Illustrate. (Several children have one teacher; one mother, one father; one house, etc. Several boys own a football. Two merchants own a store, etc.)

B. *Development:*

1. Let us learn today how to express, "The boys have a ball," or "The children have a new teacher," in the briefest way possible. Do any of you *know*? Let us begin by looking at the groups we studied yesterday. How many groups have we? Let us talk about the proper nouns first. Why seldom made plural? If made plural, would several Johns or Helens probably own anything in common? Then let us discard this group and look at the others.
2. Lead children to suggest articles which several men, women, or children, could own in common. Form given. Rule made. (See Organization of Subject-Matter, p. 246.) Rule applied to several phrases.
3. Group three, plurals ending in *s*, studied.
 - a. Bring out the need of a plural genitive as distinctive from a singular genitive. Contrast *One boy's* cap, and *Two boys'* caps.
 - b. Show how the addition of the *'s* here would make too many *s* sounds; and that to place the apostrophe alone *before* the *s* in the plural word would make it exactly like the singular. If no child knows what is done, tell how grammarians have decided in favor of the apostrophe alone (to prevent an undue number of *s* sounds) placed *after* the *s* which ends the plural, to distinguish it from the singular form.
 - c. Drill upon the fact by many illustrations.
 - d. Contrast the two methods of securing plural genitive form. What distinguishes the plural from the singular form in plurals not ending in *s*? In plurals ending in *s*?
 - e. Formulate a rule for writing plural genitives. (First make the noun plural; decide about the ending; if it ends in *s*, add an apostrophe; if it does not end in *s*, add *'s*.)

C. *Application.*—Give phrases and sentences containing both sorts of plural genitives to be written correctly.

Fourth Recitation: Distinctions in Genitives.

A. *Preparation:*

1. Very carefully review preceding work.
2. Help pupils to see the *need* of expressing correctly one's exact thoughts.

B. *Development:*

1. If children show their understanding of preceding work, the discussion of some *errors* will lead them to see for themselves that the phrase form will give the key. Select sentences containing such

errors as these: The boy's choir will meet tomorrow; the dog's tails wagged joyously; the pens' point is blunt; the boys' knife is broken; the girls' hat is pretty; the girl's mothers went away.

2. Test this by transposing a number of phrases to genitive form. Examples: A home for teachers; a dress for my doll; the mother of the girls; the husbands of the women; a house for rabbits; a cage for my bird; the teacher of the boys; the land of the Indians.
3. Test by letting pupils explain the thought of a number of *correctly written* genitives, such as: This lambs' wool; the grape's seeds; the tablets' pages; a week's work; ten minutes' study; contrasted with: this lamb's wool; the grapes' seeds; the tablet's pages; an hour's drill. (Have actual articles in class.)
4. Summarize all we have learned in the four lessons (four months, perhaps, in time.)

C. *Application*.—Seat-work upon sentences from history. (See *Applic.*, e, p. 247.)

Fifth Recitation: Drill on Genitives.

A. *Preparation*, and B, *Development*, made in preceding plans.

C. *Application*.—Devote the entire period to drills, tests, etc., such as are suggested under *Applications*, a to h, p. 246. This drill will probably disclose some misconceptions such as are given under "Cautions," p. 246, in the Subject-Matter Division, and, as the need arises, some or all of these will be explained.

NOTE.—This subject should not end here, but should be reviewed upon every pertinent occasion during the months and years which follow.

2.—A FEW VOCABULARY LESSONS.

1.—A FIFTH-GRADE LESSON ON ACTIONS.*

Purpose.—To arouse the child to the need of accuracy in reporting actions, and thus to sharpen his discrimination as to the exact meanings of words.

Preparation.—(1) A pantomime was worked out by the class from their knowledge of certain selected persons who were to be imitated. (2) The pantomime was performed, and described in writing by each child. (3) Each report was tested by action. (4) This composite report was put upon the board and tested, bit by bit: Miss Pratt sat at her desk, with her forehead propped in her hands, studying diligently. After a while Superintendent Charters entered, with his head bowed in thought, one hand thrust into his pocket and the other pulling at his lower lip. He came up to the desk with long, slow strides. "How is your school getting on?" he asked. Miss Pratt started with surprise. "Oh, pretty well," she answered.

Check.—It was found that the persons described could perform the actions without error from the written account, hence no revision was needed.

2.—FIFTH-GRADE VOCABULARY WORK ON WINTER WEATHER, with two themes to illustrate the result.

a. Words describing a *dark* day, derived from the class:

rainy	windy	cloudy	gloomy	dull	miserable
wet	dark	sloppy	misty	cold	bad
damp	foggy	dreamy	wintry	slushy	winter
cool	breezy				

* Fifth-grade work done by Mrs. Weaver (formerly Miss Pratt).

b. Words to be used in describing a *snowy* day, volunteered by the class:

soft	heavy	silvery	damp	sticky	icy
sugar	deep	light	dry	hard	frosty
clear	drifting	freezing	fluffy	quivering	frozen
white	dazzling	banked	cutting	cold	slippery
fleecy	fine	shining	floating	crusty	glittering
flaky	clean	watery	glistening	crystal	fluttering
heaped	flying	wet	sparkling		

c. Words derived to show *how* the snow *falls*:

gently	thickly	quietly	heavily	wonderfully	lazily
softly	easily	beautifully	down	fast	rapidly
swiftly	slowly	smoothly	silently	drowsily	silently
lightly	quickly				

d. *First composition*: This week the snow fell nearly every day. The snow is about a foot deep. Every morning I get up very early and shovel paths to the barn, and to our pump and shovel paths outside the yard. The first time it snowed the wind blew and heaped the snow up high and in some places there was no snow at all. Every evening after school, some boys and I go in the deep snow and play.—Herman K.

e. *Second illustration*: The snow is coming down faster than yesterday and besides the flakes are big and flaky. They are pure white and not so mealy as the other snow was and when they come down they are quiet. As the flakes fall on the ground they look as if they are thankful it is so white that they look like a white bed spread for the earth and plants.—Clarence L.

3.—SEVENTH-GRADE WORK ON WINTRY WEATHER.

This helps one to see the growth to be secured in two years. The vocabulary in each effort is the result of some class-work upon the subject, where lists of suitable expressions were secured by contributions from all, and also from literature taken in the reading and other lessons and carried over to the language; as, *aisles of steel-stemmed trees*, *arabesques*, *fret-work*, *diamond drops*, from "Sir Launfal"; and *costly ermine*, from "The First Snowfall." Three themes are given to show that in spite of class-work on vocabulary, great individuality can be secured in the written results:

a. The trees are all covered this morning with an exquisite feathery down which is very beautiful to the spectator. They look very delicate and dainty from the tip of every branch and twig to the very base of the tree. It makes a person walking under them think of fairy land with aisles of steel-stemmed trees.—Frank D.

b. Today the trees, bushes, and houses are covered with a beautiful and exquisitely delicate covering of fleecy whiteness, outlined against a sky of azure blue. The sun shining through the fret-work of twigs and branches touches them making them sparkle with a delicate kind of beauty and making an ideal winter day.—Flora L.

c. When I looked out of the window this morning I was wonderfully impressed by the mystic sight of the world. Not only was the ground piled high with the soft white snow, but the trees were most delicately clothed with frail, feathery frost, making a beautiful, fairy-like scene.—Mary Frances T.

* All seventh-grade work used was done by Miss Carrie F. Saunders.

3.—ILLUSTRATIONS OF DESCRIPTIVE WRITING.

1.—SEVENTH-GRADE WORK, USING PICTURES.

(All errors are left as they were made by the pupils in both descriptions and narrations.)

THE WAVE.

The picture is not a very large one, yet a very great expanse of water is shown.

The sea looks as though a storm was coming, for great waves are rolling toward the shore and in the foreground the surf is boiling and frothing. The waves are crested with white-caps, underneath which are dark hollows.

Flocks of sea gulls are flying and skimming across the stormy water. Their forms are scarcely seen against the lowering clouds. The sky is a sober gray making a very dismal scene.

In the distance a ship is seen fighting its way through the angry waves and trying in vain to get to the rock-bound coast.—Flora L.

THE WAVE.

Although the picture is not large, there is an immense tract of rough water shown seemingly never ending.

The frothing waves dash against the rock-bound coast without pity, sometimes bursting out like a volcano. Looking farther on, one can see the white-crested waves dashing rapidly onward, broken up here and there by dark valleys and hills.

Off in the distance a ship can be seen, beaten on all sides by the fierce uplifting waves, and making its way toward land through the stormy waters.

To the right of this are a few sea gulls soaring through the somber sky, toward the forlorn ship, for food.

The lowering, black clouds are trying their best in making the waves have their white caps on.—Meta D.

THE WAVE.

The most conspicuous thing in this picture is the stormy sea, with its undulating hills and valleys. Off in the distance one can see the towering waves come rushing madly on towards the shore, where they lash with merciless power against the rock-bound coast.

One lonely ship can be seen clear off on the dim horizon with a flock of sea gulls soaring over the water near by which shows that land is not far off.

Above the storm tossed waves, the sky is full of dark threatening clouds.—Frances S.

THE OCEAN.

Although the picture is not a large one it shows a very large area of stormy sea. As the big dark waves come rushing in from the distance they seem to get larger till at last one big wave stretches across the entire picture, then the water moves onward till it reaches the shore and dashes on the rock-bound coast.

In the distance you can see a ship tossed about by the angry waters and the dark gray clouds seem to touch the very masts of it.

Farther to the right is a large flock of sea gulls sailing along the water after the ship.—George B.

THE OCEAN.

Although the picture is small it shows a vast expanse of water. In the foreground the low foaming waters dash madly against the unseen coast, a few huge rocks stand out from the shore around which the waves whirl angrily.

Farther back is a mighty towering white-capped wave stretching from one side of the picture to the other. Back of the wave as far as the eye can see is a vast stretch of storm-tossed water.

Dreary gray clouds overhang the ocean. Far out to the left of the picture is a small sailing vessel barely visible behind the large waves.

A number of large sea gulls are soaring above the water to the right.—James T.

2.—EIGHTH-GRADE WORK, USING PICTURES.*

THE DEPARTURE OF THE PILGRIMS FROM HOLLAND.

Walking down the shore at Delft Haven, Holland, in the year 1620, I saw about fifteen people gathered on the shore and some were in a small boat. Getting nearer I could see that most of them were on their knees. One of the foremost men looked to be a young priest. He was looking up toward heaven with his arms outstretched. Some of the others' heads were bent in prayer and some were watching those in the boat. On the whole the people looked very wistful and sad. There was sorrow on the faces of the men and women in the boat who, I believe, hated to leave. This was quite a contrast to the young children and the unruly dog who were full of excitement. Two strong men standing by the boat gave it a push and sent it into the deep water. There was then a waving of hands as the boat departed. I afterward found out that they were the Pilgrims leaving for the New World.—Milton P.

WASHINGTON AT VALLEY FORGE.

One evening at Valley Forge I was walking through the woods wondering what would become of our army. Suddenly upon glancing up I beheld Washington, in six inches of snow, on his knees in prayer, not two rods off. I shall never forget the sincerity of this great man nor the appealing look on his careworn but resolute face as the accents of his petition sounded forth under those bare, uninviting, snow-laden trees.—Jay R.

THE DEATH OF GENERAL WOLFE.

General Wolfe is dying on the edge of a battle field. Lying in the center of a group of men and resting on one arm, with his hat on the ground before him, he lifts his eyes to heaven. The calmness on his face contrasts greatly with the intense grief of his comrades. Three of the men kneel beside him with sad anxious faces and hold their dying leader up. Two men stand behind Wolfe bending over so they can see his face. One of these men is holding the flag Wolfe loves so much. The two soldiers that have just rushed up are the ones that have the news of the victory. The other men stand wringing their hands and sorrowing over their leader's death. Even the Indian sitting there on the ground seems touched by the sad spectacle before him.—Marion R.

3.—EIGHTH-GRADE WORK, USING A QUOTATION FOR A FOUNDATION.

ON THE FARM.

"The gate of the barn-yard creaked beneath the merry weight of sun-brown children, listening while they swung."—*Whittier*. The great golden sun is setting behind the soft, green hills. Three roguish, laughing children are swinging on the gate of the barn-yard. Their hair, brushed so neatly in the morning, is all tumbled now and falls over the grimy little faces. The red lips are made redder by the strawberry stains upon them, and their legs, faces and arms are brown as an Indian's. The cows they are watching are straggling up the barn-yard

* Eighth-grade work done by Miss Agnes Storie.

and every now and then they can hear the faint tinkle of the bell upon the leader's neck.—Marion R.

♥
THE VIEW FROM THE BARN-YARD GATE.

"The gate of the barn-yard creaked beneath the merry weight of sun-brown children, listening while they swung."—*Whittier*. Back and forth swung an old barn-yard gate, weighed down by four laughing children, who, in the cool of the evening, were listening to the katy-dids, crickets and an occasional tinkle of a cow-bell, and looking before them at the pretty scene. Broad fields of grain swayed gently in the soft, cool breeze. The trees, too, huge poplars, slightly stirred and nodded. Best of all was the sun, a great ball of fire, gradually sinking behind the hazy horizon. The children quietly swinging gazed long at this scene even after the sun had gone down, leaving many colored streaks and a faint outline of a sun dog.—Alice I.

4.—EIGHTH-GRADE WORK—An impromptu effort to establish a given atmosphere.

A GARDEN DESOLATE.

For a quarter of a century the garden had lain desolate. Here and there among a forest of tangled weeds a stray primrose or a sickly looking daisy had fought its way through only to droop and lean wearily as if the struggle had been so prolonged and difficult that its very life had been sapped away. Were the weeds not so matted one could dimly discern traces of what used to be stately walks bordering formal gradens.

Over in one corner of the garden stood a rustic bench, moss covered and decrepit, which had once been strong and artistic. In another corner stands a trellis, broken and sagging, a wilderness of white roses crowded over it in reckless confusion. From a distance they looked beautiful, but on closer observation it is discovered that each rose's heart has an evil mildew poisoning it.

In the center of this wild picture is a fountain, cracked and yawning, with the leaves of a quarter of a century rotting in its basin. It must have been exceedingly beautiful in the days of its youth, for under the blackened surface, filled with dirt, are exquisite carvings of winged creatures, flowers, dragons and beautiful scrolls worked out in delicate fineness. The garden is enclosed by a fence, leaning here and upright there, in some places gaping, giving the passer-by an occasional fleeting glimpse of the picture of utter ruin and desolation lying within.—Eunice M.

4.—WORK LEADING UP TO NARRATIVE WRITING.

(This is a concise report of work actually done in one seventh grade by Mrs. C. B. Chorpenning and Miss Carrie F. Saunders.)

A. Nov. 15.—A situation presented: *On the Ice*.

1. Six boys—Damasius, Earl, Howard, Henry, Dean, Edward.

Four girls—Florence, Mildred, Helen, Ruth.

2. A dilapidated rail fence running along the bank.

3. The bank so low as to be easily scaled.

4. A tree overhanging the bank.

5. Henry falls in.

B. Question: What did each of the others do?

Howard ran for a rope.

The other girls and Damasius were not able to think of anything to do.

Edward ran for a rail.

Florence ran for help.

Earl came up from a distance.

Dean built a bonfire.

C. Class asked to write what Howard did.

Problem—To show haste; to introduce the elements of rescue; rope, rail, etc.

Secured the following expressions:

like a shot	rushed	Howard, remembering the rope
like an arrow	sped	Howard, seeing the rope
like the wind	instantly	Howard, noticing the rope
like a flash	immediately	rope which
at full speed	flew	rope that
shot	flashed	

D. Nov. 16.—Class asked to write what Edward did.

Problem—To show haste and that it was done at the same time as Howard's effort. Secured:

lost no time	at the same time	jerked
redoubled his speed	while	seized
with all possible speed	just as quick	tug of war
at the same moment	tore	

E. Nov. 17.—Class asked to give an account of what each of the party did as Henry fell in, showing simultaneous action.

F. Nov. 20.—Work for sentence response. Show Henry screaming as he went into the water; his efforts to get out. Sentence given: With a terrified yell as he sank into the icy water, Henry made frantic efforts to get out.

Make *efforts to get out* the strongest.

G. Nov. 22.—Make *condition in the water* strongest. Choking, sputtering, gurgling. Down, down he sank.

H. Nov. 23.—Make *warmth* strongest. Sentence given: Henry was warmed by the glowing fire. Analyzed into four parts: Henry, fire, brightness, warmth.

I. Nov. 24.—Make *brightness* strongest.

J. Dec. 5-9.—Writing entire story, revising each day; trying to increase the clearness of each point, especially *the readiness with which some devised means of help*.

K. Dec. 12.—School divided into two sections, each section making a united effort to perfect all its papers in regard to capitalization, punctuation, and paragraphing. Members of each section might consult each other when in doubt.

L. Dec. 13.—Same with regard to spelling. Misspelled words on papers had been written correctly on board by teacher before the lesson.

M. Final papers copied on white paper. One is given below as an illustration.

A SCARE.

It was a bright, clear winter day about four o'clock. It was bitterly cold.

Helen, Mildred, Ruth, Florence, Edward, Damasius and Dean were standing near the bank of a stream waiting for a race that was about to take place. Howard and Henry were preparing to race. Earl, standing by the starting place, gave the signal to start. Away they went. All went smoothly for a while. Henry began to gain. He glided past Howard. Put the race did not last very long. There was a scream and a splash. Henry had fallen in! With his mouth open, he sank under the icy cold water. He rose, sputtering and choking, grasping wildly for something to take hold of.

But while poor Henry was fighting with death, something else was going on. Howard wheeled around and flew, with three times the speed he had raced, to a rope he had remembered seeing entangled in a fence near by. He got the rope and flew back passing Damasius, Mildred, Helen and Ruth, who were paralyzed with

fear and whizzing past Edward who was tugging at a rail on the fence. Florence started to the nearest house for help and Dean had a bon-fire built in less time than it takes words to tell it. Earl hastened to the scene of disaster in time to take the rope from Howard, who was nearly exhausted, and threw it toward Henry, who grasped it as tightly as his numb fingers would permit him.

This happened in such a short time that Florence didn't have to get very far and was called back. She hastened back to find a happy party surrounding the cheerful fire. Henry was thoroly warmed and dry by this time. After the party got warm, they started off to their homes none the worse for their scare.

ILLUSTRATIONS OF FINAL STORIES FROM OTHER PROBLEMS.

HOME FROM A NUTTING PARTY.

It was in the fall of the year and four boys, Phil, John, Jay and Charles, were on the way home from a nutting party, on which Charles had fallen out of a nut tree and had sprained his ankle, but the other boys had had better luck than that, they each had a bag of nuts.

Their faces were dusty and in fact they were dusty from head to foot. The hot sun poured down upon them and the perspiration was rolling off of them in little streams.

While they were walking along under the shade of a few friendly maple trees, that hung over the edge of the bluff, they heard in the distance a rumbling noise that sounded like an avalanche, but they knew it was a runaway team.

On hearing the rapidly approaching hoof beats the boys became frightened and nervous and began looking for a place of safety. Charles finally decided to climb the steep bluff. So with a frantic struggle and a deep respiration he started the duty that his life depended upon. He kept saying to himself "it can be done, it can be done." He succeeded in his attempt and finally arrived at a place of security.

In the mean time the other three boys were looking around to see where they could go. Phil was excited and his breath came in gasps, and his teeth were chattering. The predicament he was in was enough to "freeze your young blood." He and Jay had decided to leave their nuts in the middle of the road because they thought it would stop the horses. After carefully putting their bags of nuts in the road they started down the cliff, but all the time they had their minds on the nearing team.

John thinking his bag of nuts would bring him in some change began climbing the bluff after Charles with them. With his great hindrance he succeeded in his task.

The boys were no more out of danger than, with a roar and a crash, the horses dashed by.—Nanna B.

THE FIRE.

Cold, bleak, biting weather. Level stretches of glittering snow, broken by trees made intensely black by the cold moon and stars. Houses and scarred bluffs in the distance.

In one of these houses a girl was asleep. A whistle sounded loud and clear. Maude stirred. Another whistle. She rubbed her eyes and sat up looking none too good natured. Again the whistle! She got out of bed and pattered across the floor to the window where she looked out. Nothing in sight. Oh yes! A wreath of gray smoke whirled out of a window of the large brick building across the street. It was the Normal School!! She hastily summoned her father who had not been awakened by the alarm. Then she dressed with frantic haste.

As she was hurrying on her coat the chief's wagon whirled madly down Main Street, clanging its bell and leaving a line of gaping windows and whirling snow in its wake. It had scarcely been seen before the hook and ladder dashed past. The clang clan-n-n-n-g on the startled air brought fearful thoughts to many minds. Shrieking and banging the chemical rushed swiftly onward and the people were thoroly aroused as the hose cart galloped past. Shouts and screams mingled with the sound of banging doors and windows were heard as Maude stumbled down the steps and across the street clinging tightly to her father's hand. She had no sooner come to the curbing when she saw a moving figure near the north corner of the building. It was Mr. Maxwell! She had hardly comprehended who it was when she was stumbling into a smothering biting mass of sharp snow. She gathered herself up, laughing, with wrists and face scratched and smarting. Her father caught her hand and she found herself flying over the fence. On she scrambled thru the snow. She ran to the corner where Mr. Maxwell's house was and seated herself on the fence.

By this time darting tongues of flame were cutting the rolling masses of swirling smoke and throwing a ghastly light on the building and faces. The fire was well under way when discovered or it would not have been so fierce now. When any one could see the moon the fire made it a trembling blot of silvery light which was quickly clouded over by the masses of night-like smoke.

In a quick orderly way the firemen had gone about their respective duties and masterful order only was seen among the rubber mailed bodies. All of a sudden a low rumbling sound was heard and a great dash of water came with powerful force against and into the building. Then some men entered and chopped away parts of the woodwork and water was directed toward the opening thus made. For a long time the fire rose and fell, and then swelled again, but the firemen got the best of it.—Lelia M.

5.—AN EIGHTH-GRADE NEWSPAPER.*

AN EXPERIMENT IN ENGLISH INVOLVING UNITY OF PURPOSE AS AGAINST INDIVIDUAL EFFORT.

E. CATHERINE BURKHOLDER,

State Normal School, Winona, Minnesota.

The entire composition class of thirty-nine eighth-grade pupils resolved itself into an office force and devoted its composition time for two weeks to newspaper work. The paper was to be finished by the end of two weeks and was to be read by members of the "force" before an assembly of all the grades. The time limit furnished an incentive for writing under stress, and the prospective audience furnished the motive for creditable work. At the first few meetings of the force preliminary problems were considered. The most important of these were: (1) Length of time for reading the paper; (2) size and form of paper; (3) audience; (4) nature of material to go into paper; (5) plan of manipulation of work. After discussion we decided to "get out" a paper that could be read to an audience in twenty-five minutes. Children from the first grade through the seventh, with their teachers, supervisors, and principal, made up the audience. This presented a problem as to subject-matter. We decided that articles must be written which would be of interest to little children and yet be worthy of eighth-grade efforts. This led to consideration of the nature of the material: Should the paper contain

* Reprinted here by courtesy of the author and of the publishers of *The Elementary School Teacher* for May, 1914.

town news or school news? Should it be of local or of general interest? After a frank discussion some one suggested that we consider the school as a locality or community, and that the children, teachers, and all connected with the school, be considered the citizens, and that the different phases of school-work, such as manual training, gymnasium, reading, geography, etc., constitute the enterprises of the community. This was satisfactory to all, for now we could get out a newspaper concerned entirely with school affairs. It was still left to consider under what heads our articles should appear. The children were all emphatic in holding entirely to the newspaper idea, and this list of headings was decided upon:

Personal Mention
Editorial
City News
Story

Poem
Market Reports
Weather Report
Sporting News

Cartoons
Advertisements
Funny Column

Before the force could get down to writing, there were still considerations to be disposed of. The paper was to be read the Friday preceding Thanksgiving, hence it was decided that it should be a Thanksgiving-number, and the President's proclamation was added to our list. It was suggested that the story ought to be a Thanksgiving one. Cartoons appropriate and advertisements incident to Thanksgiving seemed easy.

We decided that in addition to our other topics we would write up some phase of the work connected with each room in the elementary school. We planned that these articles should make up an important part of the material of the paper, for, as one girl put it, "That will make it easy to interest the children, for even the first-grade children will like to hear what we have to say about them."

As to manipulation of the work: An editor-in-chief and two assistants were elected. The three boys at once felt the responsibility of making it "go." Reporters were also elected—two for each room in the elementary school and two for each of the other headings in our list.

The editor-in-chief and his assistants thought it would be wise that everybody on the force should write an editorial and allow the editors to choose the best one. This plan was also suggested for the story. One meeting was taken up with a discussion on "editorials." At its close the children knew the essentials of a good one. They knew where it was to be found in the paper and they had decided that theirs should set forth the sentiments of their paper in regard to Thanksgiving. Some of the editorials were quite good, but the editors saw how it was possible to work up a fine one by putting together selected thoughts from all. This is the editorial as it went into the paper:

This paper believes that "the best Thanksgiving is Thanksliving." We ought to make every day in the year a Thanksgiving day. Most people seem to think that a good time, a holiday, and a big dinner—with emphasis on the dinner—constitute a perfect Thanksgiving. But we would have them remember the old saying of Shakespeare, "Yet for aught I see they are sick that surfeit with too much as they that starve with nothing."

By far the most interesting feature of all the work was that in connection with the reports from the several rooms. The reporters asked the teachers for interviews and arranged for a visiting-time when they might observe the work going on. I saw in advance the different teachers and explained fully to them what we were doing. I asked them to grant the visiting-time to the reporters when there was work going on that they would like especially well to have reported. (Coöperation here meant a unifying influence so far as the school as a whole was concerned.)

At the appointed times the reporters went for their visits. They always came back scarcely able to wait until they could find time to write up what they

had seen and heard. The two reporters from each room worked together and came to me with their articles or asked permission to read them to the class. All the articles that went into the paper were read to the entire class for suggestions, the class taking on the attitude of an audience to see whether or no the writing was clear and interesting. Criticism was free and often severe, but common interest in the paper made it easy to give and easy to take. The reporters were always eager to go to work at revising or rewriting. In several instances the articles were worked over the fourth and fifth time—the children never showing any signs of weariness. Here are two articles typical of room reports:

MISS STAPLES'S ROOM (FIRST GRADE).

Last week on Thursday afternoon Miss Staples's room was visited by two reporters of this paper. It is a light, cheery room with large east windows. It is also made pleasant with its cream-colored walls, brown woodwork, plants, palms, and goldfish.

At half-past one the attention of the school was called by the words, "Lips still." Then the children were requested to raise their hands so Miss Staples might see if they were clean. The B reading-class got their chairs and placed them very carefully and quietly in a semicircle in the front of the room, while the C class passed to the board to draw houses and trees that they could see out of the window. The children were very much interested in their reading, and they dramatized it very well by putting a great deal of feeling into it. The general attitude of the room was very good.

The desks are placed in a sort of semicircle so that the children can watch each other while they recite. The tennis shoes are fastened on the rod under the desk. On the right side of each desk is a black pocket. The contents of this pocket are: A box of paints, a paint-dish, a paint-cloth, a box of crayons, a pair of scissors, a button-hook, and a finger-nail cleaner. On the other side of the desk is another pocket containing a drinking-cup wrapped in a napkin to keep it clean.

As a part of the children's work, they make up dreams. They fold their arms and dream. Those who have dreams pass to the front of the room to tell them. This is good practice for them to learn to speak before an audience. One little boy dreamed this: "I dreamed it was the Fourth of July and I was a fire-cracker. Pretty soon I turned into a torpedo. I had a face and arms and legs. I was walking along the street and I tripped and fell on my side and exploded."

STORIES BY MISS MARVIN'S PUPILS (FOURTH GRADE).

The pupils of Miss Marvin's room were writing stories of dogs on Thursday morning of last week. All the stories are to be typewritten by the pupils themselves, bound in a book, and then sent to the children at the hospital.

These stories were illustrated in three different ways: with kodak pictures, freehand drawings, and with tracings. Copies are to be kept also and sent to the Tri-County Fair next fall.

These are some of the best subjects: "My Old Cat on Sunday Morning," "A Story of Prince," "My Cat Tempest," "A True Story of Rover," "The Result of His Visit," "A True Story of Rags." They were all very good.

As time drew near for the paper to be finished, during office hours (composition and penmanship time) nearly all phases of the work in all stages of development could be seen going on. Interviews, writing, revising, cartoon-making, conferences with the editors, etc., were in progress. The children were at work singly and in groups in the main office (our schoolroom), at the tables in the text-book library, and at the long table in the principal's office.

We called the paper the *Elementary School Weekly*. It was hand-printed on a double sheet of four pages. Each page was 15x13 inches in size and was divided into four columns—the customary margins being allowed. The cartoons were reproduced on large sheets of tagboard and placed where they could be seen easily by the audience. Members of the force read to the audience the different articles in the paper, including the "funny column" and advertisements. Proof of its success was the fact that it held the entire attention of all the audience during the reading.

As to results: Aside from the benefits in English resulting from opportunity offered for spontaneity and freedom of expression, the children had had experi-

ence in doing team-work—they had worked together for a common end and knew they had done something worth while. This gave them confidence and assurance, which showed in greater strength of attack upon other school affairs involving sustained effort, coöperation, and power of initiative.

E.—ONE HUNDRED SPELLING DEMONS OF THE ENGLISH LANGUAGE.*

(Order not significant after first four.)

which	hear	seems	says	though	whole
their	here	Tuesday	having	coming	won't
there	write	wear	just	early	cough
separate	writing	answer	doctor	instead	piece
don't	heard	two	whether	easy	raise
meant	does	too	believe	through	ache
business	once	ready	knew	every	read
many	would	forty	laid	they	said
friend	can't	hour	tear	half	hoarse
some	sure	trouble	choose	break	shoes
been	loose	among	tired	buy	tonight
since	lose	busy	grammar	again	wrote
used	Wednesday	built	minute	very	enough
always	country	color	any	none	truly
where	February	making	much	week	sugar
women	know	dear	beginning	often	straight
done	could	guess	blue		

V.—ARITHMETIC AIDS.

A.—OUTLINE OF SOCIAL SITUATIONS WITHIN WHICH VARIOUS ARITHMETICAL PROCESSES DEVELOPED.

NOTE: The succeeding outline is an attempt to show more clearly how each commonly taught topic of arithmetic develops in the child's evolution as it did in the evolution of the race, and, consequently, how each topic can be motivated and given its rightful evaluation.

- I. *Barter*—Exchange of wholes, without forethought or imagination. Different articles evaluated by immediate needs or by the feelings, as primitive peoples exchange furs for bright beads, or as boys exchange a knife for a bite of apple. Such exchange is often ignored later; for example, the Indian sometimes wanted his blanket returned, or the child desires his knife after the apple is eaten.
 - A. Counting, about the only number process needed, naturally developed from rhythmic movements in dealing out articles.
 - B. What little ratio seeing there is, is inaccurate; controlled by the feelings.
- II. *Exchange*—Made with more thought; articles evaluated by less emotional standards; greater equality of values present.
 - A. Need of comparison developed.
 1. Indefinite comparisons.

* From the "Concrete Investigation of the Material of English Spelling," The University of South Dakota, Vermilion. Price 10c.

- a. Larger, smaller, longer, taller, etc.
 - b. Equals recognized.
 - 2. Definite comparisons.
 - a. Sums and differences developed to answer how much more or less.
 - b. Products and ratios developed to answer how many times or what part.
 - B. Need of measuring felt.
 - 1. Natural standards—foot, span, etc.
 - 2. Units of denominate-number tables developed.
 - C. Economy demanded division of wholes into parts—[Compare money values, sales, etc., of pioneer days in any locality with the same of modern days, where population is crowded: 25c or 5c the smallest coin *versus* cent today, in the United States; money equal to one-tenth of a cent in many foreign lands. Eggs by the dozen (often the baker's dozen, 13) *versus* by the pound. Numerous illustrations can be found.] Hence, there were felt certain needs:
 - 1. Need of fractions to express the fragments or fractured wholes.
 - 2. Need of complete denominate-number tables with definite relations between measures. Standard measures fixed by law.
 - 3. Symbols needed to express relations in long computations.
 - a. Roman.
 - b. Arabic or Hindu.
- III. *Merchantry* conducted to help both the merchant and society.
- A. Goods evaluated according to—
 - 1. Law of supply and demand.
 - 2. What others charge.
 - 3. Merchant's need of selling—
 - a. To prevent loss.
 - b. To prevent bankruptcy, causing others to lose, etc.
 - B. As fractional relations became complicated, there grew up a decimal system of whole numbers and fractions, and, in some countries, of measures, too.
 - C. The merchant's need of making a living created a system of selling for profit. Keeping account of what goods brought best and poorest returns resulted in a study of "profit and loss," "book-keeping," etc.
 - D. A merchant's need of money to keep the business going resulted in various business operations:
 - 1. Partnership (cumbersome, awkward, embarrassing at times.)
 - 2. Borrowing money and hence paying "interest," giving a "mortgage," making a "note."
 - 3. Selling goods at a "discount" for the sake of cash.
 - 4. Organizing stock companies and issuing "stocks and bonds."
 - E. Computing discounts, interest, etc., "on the hundred" found easy, hence "percentage" developed.
 - F. The need of the merchant particularly, but of any individual, to protect his goods against loss by some accident, brought about the business of "insurance."
 - G. The need of coöperation for the sake of protection and economy (of time, energy, and money), caused "assessments" to be made, "taxes" to be levied, and a system of "banking" to be built up.

IV. The selling of *labor*, rather than of produce, created a need for certain "mensuration" processes.

- A. In building a house, barn, poultry-house, granary, etc.
 - 1. Excavating for cellar, cistern, drains, etc.
 - 2. Building the foundations, chimneys, and other masonry.
 - 3. Carpentry—measurements of joists, beams, sheathing, clapboarding, shingling, etc.
 - 4. Plastering, painting, papering, and related processes.
 - 5. Plumbing, ventilating, heating problems.
- B. In planting fields and gardens.
 - 1. Land measurements.
 - 2. Fencing.
 - 3. Drainage, etc.¹
- C. In furnishing a home.
 - 1. Carpet laying.
 - 2. Curtain making.
 - 3. Planning the fuel problem—wood measure, or coal-bin capacity, for example, and other processes easily seen.

V. *Commerce* (quite properly applied to the whole subject, but used in its more specific sense of a wider exchange of merchantry).

- A. Goods evaluated according to—
 - 1. World's supply and demand.
 - 2. Protection of home industries, "duties," "tariff," etc.
 - 3. Cost of transportation.
 - 4. Protection of retail merchants.
 - 5. Protection of labor—"sweatshops," etc.
- B. Arithmetical processes in addition to those given are few—possibly only "duties," "commission," and "brokerage." Of course there is a wider use of all the earlier-developed processes, such as money-lending and banking; and an extension of mensuration processes as needed in wholesale business—bins, carloads, tanks, ships' capacities, etc.

The real *science* of arithmetic should be studied in college, after algebra and geometry have been pursued in high school; the business of the elementary school is to distribute the subject-matter so that pupils who leave school early will have had time to secure from the subject two things: (1) Knowledge of how a process should be done, which gives the child a sense of power; and (2) practice in using this new acquisition (in which he delights) until he has perfect control over it. Those who stay in school throughout the eight years should secure a *third* ability—that of applying the acquired skill in computation to many sorts of problems such as life will offer. An examination of the common practice in distributing subject-matter, and a checking of the results with children's growing feeling of need, leads one to make very little change, if any, in the usual distribution of arithmetical material.

In general, first-grade pupils are in the "age of barter," where counting is about the only process needed; second-, third-, and fourth-grade work lies in the field of "exchange," with need of the fundamental processes, of ratio-seeing, of symbols for use in computation, of simple denominate-number tables, and of easy fractions; fifth-, sixth-, and seventh-grade pupils have need of all preceding work, and, in addition, as their interests lie in the fields of "merchantry" and "labor exchange," they master simple and decimal fractions, percentage and its applications, and necessary mensuration processes. Many of the merchantry problems, such as stocks and bonds, insurance, and banking, together with new problems arising in "commerce," form the subject-matter for eighth-grade work, if arithmetic is there given a place on the program.

B.—LESSON PLANS.

OUTLINE OF A PLAN FOR TEACHING PUPILS HOW TO PAY DISTANT INDEBTEDNESS.

(By MISS AGNES G. STORIE, Normal, Ill.)

I. Teacher has ready: Receipt for registered letter. Return notices of delivery of registered letters. Applications for money order. (One or more for each pupil to fill out.) Money order, attached coupon, and receipt. Advertising material of express companies showing advantages and scope of their service. Checks (unused and returned) with stubs. Drafts.

II. Assignment made before lesson was given:

Through Miss Patterson, members of the seventh grade ordered seeds from L. L. May & Co., St. Paul, to the amount of \$5.99.

1. Find out so far as possible in what ways Miss Patterson might pay the bill.
2. What would she have to do to pay the debt in each of these ways?
3. What are the advantages of each method?
4. Which way do you think she chose? Be ready to defend your position.

III. General plan of recitation-work:

A. Last month seeds were ordered, through Miss Patterson, of L. L. May & Co., St. Paul, Minn.

Before the company would fill the order for the seeds what would they expect of Miss Patterson?

Let us see what we can find out about the possible means Miss Patterson might have employed to settle the account.

B. Questions and discussions to develop subject-matter and to organize what children's experience furnishes:

Means of making payments due at a distance.

1. Sending actual money (or stamps) by—
 - a. Ordinary mail.
 - (1) Advantages. (2) Disadvantages.
 - b. Registered letter.
 - (1) Manner of registering. (2) Fee. (3) Advantages and disadvantages.
 - c. Express.
 - (1) Service to government and banks. (2) Cost. (3) Advantages.
2. Sending an order for money.
 - a. Money-order.
 - (1) Postoffice—Manner of securing; form; fee; advantages.
 - (2) Express—Comparison with postoffice money-order; advantages.
 - (3) Telegraphic—Method employed; fee; advantages.
 - b. Personal check.
 - Review of form; fee; advantages.
 - c. Drafts.
 - Kinds; parties; exchange; advantages.

IV. *Result secured*—Children taught (1) to notice ordinary business transactions and to contribute their knowledge to a common cause; (2) the various

ways of canceling indebtedness at a distance; and (3) the manner of employing each of the several methods, with its relative advantages.

A SERIES OF OBSERVED RECITATIONS ON INTEREST.

(Given to a Seventh Grade by MISS CARRIE F. SAUNDERS, Onalaska, Wis.)

First Recitation.

A. *Preparation*: "In our last work what reasons did we find for a merchant's giving a *discount* to a customer? [Merchant needs money, so prefers to take less for the goods than he once planned to do, etc.] Is there anything else a man may honestly do when he needs money? [Borrow.] Is it fair to pay a person for the use of his money? The amount paid is called *interest*."

B. *Development*: "On what was discount reckoned? [On list price, marked price, first remainder, second remainder, etc.; cost, or bill.] On what is the interest reckoned? [On the amount borrowed from the one man's standpoint; on the amount loaned from the other's standpoint.] We need a name for this amount so we can more easily talk about it; it is called the *principal* [note spelling of last syllable]."

"I want to borrow one dollar from you for a year. How much do you think it would be fair for me to pay you?" [Different pupils answered "10c," "25c," "6c," "Oh, nothing."]

"Suppose Gay did lend me \$1.00 for a year and I paid him 10c, what per cent of the amount borrowed would I be paying? Then he lends money at what %? [10%.] At what rate would James be lending money, if he asked me 6c for the use of his \$1.00? Kenneth (who wanted 25c)? Then the *rate* of interest means what? [Accept any satisfactory definition.] Just as you differed in what you thought it fair to charge me, so men differ in the business world, and a few selfish ones take advantage of another's need and charge more at that time than usual. Hence the law has fixed upon a rate that is counted fair. The laws of the several states differ; but, no matter what the law, if a man charges in that state more than the rate fixed by law he is guilty of usury. [You may recall the name "usurer" given to Shylock; we are not going to deal with any people guilty of usury, but you'll find the term in your book—so I give it.]"

"In some oral problems that I give you, you may each time tell me the *principal*, the *interest*, and the *rate*. [Many examples rapidly given.] I lend \$100 at 6%; at 10%; at 12½%. I lend \$100 to you for a year at 8%; what will you pay me? At 7%; at 9%; at 9½%; 10½%; 11½%; 12½%. [This series due to children's missing one question including the ½%.] Try \$200. Lend it at 4%. Lend \$300 at 3%; \$100 at 3½%; \$200 at 3½%; \$300 at 3½%; \$350 at 3½%. [One child permitted to go to blackboard for this.] Let us try two years. Lend \$100 at 6% for two years. How much interest would you receive? \$300 at 4% for three years; \$350 at 3½% for two years." Form for indicating operation here developed, using children's former knowledge of discount.

$$2 \times .035 \times \$350 = \$24.50$$

Assignment, end of first recitation—Many problems demanding the finding of any interest on any sum for any whole number of years.

Remainder of lessons merely outlined, with a few especially good questions interjected:

Second recitation: "If I lend you \$100 for 1 year at 6%, what must you pay me back? \$106. Which part of this is principal? Which interest? What do

we call the whole [teacher tells, *the amount*]?" Children asked to give the amounts for \$100, 2 years, 6%; \$200, 2 years, 6%; \$300, 4 years, 5%; \$400, 3 years, 3%. "Perhaps I do not know the number of years, but do know that I loaned the money in 1908, and had it paid back in 1910. I borrow money on a certain date in 1905 and pay it back on the same date in 1913. A man borrowed \$200 Jan. 1, 1904, at 5%, and paid it Jan. 1, 1910; what interest did he pay?"

"We have another situation to learn today. A man may want money for just a part of a year, just a few days even, to tide him over a situation; what would be fair for him to pay? The whole year's interest? I wish to borrow \$100 at 6% for 1 month; what should I pay? \$100 at 8% for 6 months; \$100 at 8% for 9 months; \$200 at 3% for 3 months; for 1½ months; for 2 months; etc. [Prove each.]"

"Mr. Brown borrowed \$300 at 7% and paid off the note in 4 years and 5 months. How much did Mr. Brown pay the lender in all?"

Assignment, end of second day—"You may make up some problems in which the time always includes some *parts* of years. Find a form of operation that will simplify your work."

Third day: Teacher uses examples brought in by pupils and leads them to select a form of statement that will indicate the interest; one to indicate the amount; *e. g.*:

\$1420 at 6% for 4½ years.

$4.5 \times .06 \times \$1420 = \text{the interest.}$

$4.5 \times .06 \times \$1420 + \$1420 = \text{the amount.}$

Other forms worked out and discussed; *e. g.*:

$$\frac{127 \times \$1420}{100} = \text{amount.}$$

"I have a new thing to propose. I want to borrow the same old \$100, but one year isn't long enough; nor is 1 year and 6 months long enough. I want it a few days longer. Will you charge me? [Children answer—some "no," some "yes."] It is good *business* to charge me. Suppose I wish the money for 1 year 6 months and 15 days. How can you treat the 15 days?" From this and other problems children tell of different ways to use the days. Most chose to reduce the months and days to a fraction of a year and found several ways of doing so; *e. g.*, 6 mo. 15 da. = ½ yr. + 1/24 yr. = 13/24 yr. Or 195 da. = 195/360 yr. = 13/24 yr. Or 6½/12 yr. = 13/24 yr.

Several examples tried, with such time periods as 2 years 7 months 18 days given.

"I borrowed some money on April 1st and returned it April 10th. How long did I keep it? [10 days—no, first day didn't count—9 days.] How long is money kept if borrowed on the 2d of a month and returned on the 22d? On the 3d and returned on the 30th? On the 5th and returned on the 12th? On the 8th and returned on the 17th? On the 4th of July, 1776, and returned on the 9th of September, 1783?"

Drill on examples from text and other arithmetics, in which differences in dates must be found.

The succeeding recitation topics are evident in this list of the steps used in development:

1. Borrowing is one means of securing money when needed.

2. Fair to pay for such use of money.
3. Interest the name for money so paid. Principal the name for sum borrowed.
4. Rate of interest fixed by law in most states. (Usury, a rate above the legal rate.)
5. Drill upon recognition of principal, rate, and interest, in each problem.
6. Drill on getting interest when principal and rate are known.
 - a. Principal left the same and rate frequently changed.
 - b. Principal changed and rate ($3\frac{1}{2}\%$) kept.
 - c. Principal and rate both changed.
 - d. Time added—full years only.
7. Form of expression developed through thought process.
8. Testing all previous work, clearing up inaccuracies of form, of grading results, of writing per cents in different ways, etc.
9. "Amount" learned as the sum of principal and interest due.
10. Finding *time* when dates are given: years only to subtract; *e. g.*, from Jan. 1, 1903, to Jan. 1, 1910.
11. Drill on finding interest for—
 - a. Parts of years—months.
 - b. Years and months.
12. Expression of interest in one statement. Amount attempted to be similarly expressed. Easy for one year. Difficult for longer time.
13. Finding interest for—
 - a. Days—part of a month or part of a year.
 - b. Months and days.
 - c. Years, months, and days—Expression for this developed.
14. Finding time from dates given, including differences in months and days as well as years.
15. Drill on finding simple interest in problems involving all the situations developed.
16. Notes—need of making—form, etc., discussed and taught if needed.
17. Stock "dividends" and bond "coupons" discussed but not taught unless the local course of study should demand it.
18. Compound interest, discussed only.
19. Partial payments, discussed only.

A PLAN FOR TEACHING INSURANCE TO UPPER-GRADE PUPILS.

(By MISS AGNES STORIE, Normal, Ill.)

Teacher's Organization:

- A. Race need: How can persons and property be protected against loss by calamity?
- B. Satisfied by the development of the present system of insurance.
 1. Object of insurance—To protect a person, or family, or property, against loss by calamity.
 - a. Person
 1. Death, hence family helped.
 2. Accident, hence self helped.
 3. Illness, self helped.
 4. Annuity, self helped.

} Family indirectly helped.

b. Property

- | | | |
|-----------------|--------------------|----------------------|
| 1. Fire. | 7. Flood. | 10. Water loss. |
| 2. Wind. | 8. Accident (plate | 11. Transportation |
| 3. Hail. | glass windows, | loss. |
| 4. Sea dangers. | stock, standing | 12. Explosion. |
| 5. Theft. | grain.) | 13. Builder's insur- |
| 6. Wreck. | 9. Lightning. | ance, etc. |

2. How secure this protection? Plan of procedure illustrated by the plan employed in securing fire insurance.

Property owner seeks insurer, or underwriter.

1. States location and value of his property.

a. *Real value*—tested by—

1. Opinion of many.
2. Original cost *plus* improvement and *minus* deteriorations from: Change in town; change in locality; change in all property; etc.

2. States proportion of value for which he wishes to insure his property.

a. *Insured value*—may be the same as real value, but is usually less—because owner doesn't care to pay high rate.

3. States time for which he wishes to insure his property.

a. 30 days, 60 days, 1 year, etc.

b. Rate for three years equals less than three times rate for one year, hence an advantage to owner to insure for a long time. Advantage to company to have money to loan. Rate for five years equals about three times rate for one year.

b. Underwriter then—

1. Inspects property.
2. Agrees (or not) to insure it.
3. Classifies it according to the risk.

a. *Protection*.

1. Best sort—ideal protection.
- 2, 3, 4, 5. These intermediate classes pertain to buildings with less and less protection, or which contain inflammables.
6. Almost none, or none.

b. *Construction*.

1. Material of which built.
2. Age of building.
3. Relation of open spaces—stairways, air-shafts, pipes, etc.,—to places of fire-beginnings.
4. Condition of flues, etc.
5. Kind of heat employed, etc.
6. *Sort* of building—barn, house, store, etc.

c. *Location*.

1. Isolated, or near other buildings, in city.
2. Hill or valley, etc., in country.

4. Tells owner of rate.

c. Property owner agrees to insure.

d. Underwriter then collects premium from owner and writes and gives owner a *policy*.

3. Definitions required during lesson:

- a. The *insurer*, *insurance company*, and *underwriters*, are names applied to the person or firm which guarantees to pay to the property owner a certain sum in case he loses his property.
- b. The *insured* is the person who secures the protection of an insurance company.
- c. The *policy* is the written agreement of the underwriters to pay a sum of money to the property owner in case of loss.
- d. The *face of the policy* is the sum agreed to be paid in case of loss.
- e. The *real value* of the property is the value it possesses for any one, regardless of sentiment or original cost.
- f. The *insured value* is the amount for which the property is insured.
- g. The *premium* is the sum paid by the owner for his guaranteed protection.

C. Materials needed. Some real policies to show. Some *good problems* ready to propose.

Method of Procedure in Class.

Two to five recitations are needed, according to age of pupils and previous training.

- A. *Preparation*: (The topic may have been assigned and so children may have been thinking about insurance. Also, most upper-grade children know from their own experience something about insurance.) An atmosphere of work is created by the teacher's attitude and enthusiasm.
- B. *Development*: How could a person protect himself against the loss of his property by some calamity? (By insuring the property.) Against what might he insure his property? (Fire, wind, hail.) If a merchant were shipping goods from foreign countries, against what might he wish to insure? (Against marine dangers.) (Perhaps children recall Antonio's ventures in the "Merchant of Venice.")

How should one proceed to get his property insured? (Go to an insurance agent or company.) What other names are there for insurance company? (Underwriters, insurers.) What *is* an underwriter? (Definition given.)

What is the individual who takes out an insurance called? (The *insured*.) Who is the insured? (Definition.)

What will the company do before agreeing to insure the property? (Inspect property, ascertain value, liability to risk, etc.)

How is the value set upon the property determined? (See Teacher's Organization, p. 268.)

What is the sum for which a person gets his property insured called? (Insured value, insurance, face of policy.) What is the face of the policy? The insured value? The insurance? (Definitions.)

How does the insured value compare in amount with the real value, usually? (Insured value is smaller than real value.) Why does an insurance company prefer to insure property for less than its real value? (Discussion of lessened possibility for dishonesty on part of insured.) Under what conditions will a company insure property for its full value? (Discussion.)

How may a company protect itself against a large loss in case an insurer desires to insure a valuable piece of property; for instance, a building occupying a large portion of a city block? (It may assume full risk and reinsure, or transfer part of risk directly to another company, assuming only such portion as it wishes.)

What prevents a person's insuring his property in several companies for more than its real value? (See conditions of policies.)

What right does the company reserve instead of paying damages? (Right to make repairs.)

What would a company do in case of partial loss? (See "average clause.")

For how long a time may property be insured? (30 days, 60 days, 1 year, 3 years, 5 years, 7 years, are usual periods.) What determines the length of time for which the insurer will take the risk? (Condition of property, its location, probable date of sale, etc.) Show why these conditions affect the time element of the agreement. How definite is the time mentioned as the expiration of the agreement? (See policies.) Why is this necessary? (Discussion.) Why does not a company insure property for very long periods? (Discussion.)

How does the rate for a longer period compare with that for a shorter period? (It is smaller in proportion.) How does this profit each party to the transaction? (See Teacher's Organization, p. 268.)

What does the company expect of the insured for assuming the risk? (A premium.) What is a premium? (Definition.) How is it possible for an insurance company to guarantee to pay so large a sum to the insured in case of loss? (Discussion of per cent of losses and investment of moneys received.)

On what is the premium reckoned? (Face of policy.) In what way is the rate stated? (In dollars per hundred or thousand, and per cent of insured value.)

(Problems to test understanding of situation may be introduced here, or reserved for use after development of whole situation, according to maturity of class.)

What does owner lose in case of destruction of property? (Premium and part of value not insured.) What does company lose? (Insured value minus premium.) What does the combined loss of owner and company equal? (Real value of property.)

What determines the rate charged for insuring a given piece of property? (The liability to risk.) What factors determine the probable risk incurred? (Nature of protection, construction, and location.) Which of these factors is considered first? (Protection.) (Show agent's book giving rates for groups into which property may be classified according to protection offered. See Teacher's Organization, p. 268.) What is it necessary for the company to do in order that the rate may be fixed so far as this factor is concerned? (Determine in which class property is.)

What is the next factor to be considered in determining the rate of premium? (Character of structure.) Illustrate how details of construction affect the rate. (See Teacher's Organization.)

What is the third factor in determining the rate? (Location.) Show how location affects rate. (See Teacher's Organization.)

How have these rates of insurance been so definitely determined? (Through statistics kept during a period of years. To illustrate: Suppose that it is found that of every 6000 dwellings insured for \$3500 each, 60 are destroyed by fire annually. What sum is needed annually to make good the loss? ($60 \times \$3500$ or \$210,000.) What is the total insured value? ($6000 \times \$3500$ or \$21,000,000.)

What is the relation of the loss to the insured value? (The loss of \$210,000 is 1% of the insured value, \$21,000,000.) What % of insured value must company ask to cover actual loss? This is the so-called natural rate of insurance. What must the company make besides this actual loss? (Expenses and profit.) How will the rate they charge for taking the risk compare with this "natural" rate? (It will be larger.) Yes, they are said to "load" the "natural" rate—to 2%, perhaps.

What does the company give the insured to show he has purchased protection? (A policy.) What is a policy? (Definition.) (Insurance policies should be consulted and discussed.) Mention at least six conditions imposed upon the insured in a policy. How may the insured forfeit his policy?

C. *Application.*

Discuss the value of insurance to the insured. Outline the manner of insuring property. Give a two-minute talk on the factors determining the rate of premium. Give the essential conditions of a policy. (Pupils of class should supplement and criticise the individual recitations until subject-matter is clear.) Solution of problems involving real situations. Special reports on fires and their causes.

VI.—HELPS IN GEOGRAPHY.

A.—ILLUSTRATIVE LESSON UPON LATITUDE AND LONGITUDE FOR FOURTH GRADE OR ABOVE.

NOTE: The following plan, though called one lesson, is intended to cover from five to ten recitation periods, according to the ability of the class. The special treatment is for beginning fourth-grade pupils, but the same general plan has been successfully used in higher grades.

A. *Race Need or Aim:* To find a way accurately to locate places on the earth's surface.

B. Satisfaction found in the study of *latitude* and *longitude*.

1. Means of locating places—

a. In a school-building.

b. In the country.

c. In a city—

1. By well-known buildings.

2. By street and number.

d. Anywhere on the earth's surface—

1. By natural objects.

2. By latitude and longitude.

a. Necessity for parallels and meridians.

2. Latitude—

a. How measured.

b. Parallels.

1. Meaning of name.

2. Location of.
3. Practical use of.
- c. Function of latitude.
3. Longitude.
 - a. How measured.
 - b. Meridians.
 1. Meaning of name.
 2. Location of.
 3. Practical use of.
 - c. Function of longitude.
4. Value of latitude and longitude used together.

C. Materials: Globe, maps of several kinds, plain and colored crayon, material for children to use in map making, sensible and interesting localities with their latitude and longitude hunted up.

Method.—Preparation—1. Questions leading children to see the different methods of locating places. For example: "Elmer, could you take this picture to Miss Speckman for me? Tell me where you will go, that I may be sure you know the room." (If Elmer doesn't know, let some child tell him.) Ask other questions about the location of various rooms—the music-room, the museum, the physical laboratory, the library, etc., letting children see that we must have knowledge of some rooms, as "guide posts" to us in finding others.

2. In the country, we tell strangers where to find desired houses, roads, etc., by the hills, mountains, bluffs, valleys, rivers, bridges, cross-roads, or by houses passed. Or we may speak of the number of miles. Bring this out by questions. If the school is in the country, children may be asked to tell how to reach their homes, etc.

3. In a city, when asked by a stranger to locate some place, we usually ask him whether he knows where the postoffice, hotel, library, or normal school is; or we show him one of these buildings as his "guide post." Ask children to locate (in Winona) Hardt's art store, their own homes, etc., and their answers will prove the above statement true. Is there any better or surer way of locating places? (By knowing the street and number of the house.) How could a stranger find the street and house? (He would need a map giving names of the city streets, etc. Children have made city maps, and hence understand this.)

4. "How are places on the Earth's surface located?" By mountains, rivers, lakes, etc. Buffalo is at the eastern end of Lake Erie. New Orleans is near the mouth of the Mississippi river; etc.

5. "What will sailors on the ocean do, when they have no mountains or other forms to guide them? Do you feel that they need a map with something like our streets and cross streets on it? Suppose we find out, today, what men have done to help sailors and others to locate places accurately."

Development.—1. "Look at these maps and the globe and see whether you find any lines that cross one another like streets. Are they on all maps? Look through your geographies. Why haven't you noticed them before? Yes, they are light; men have drawn them so because there are really no such lines or "streets" on the earth's surface itself, but are just *imagined* to be there. [Use globe as much as possible.] Draw your fingers over some of the lines which you see. Which lines run north and south? Which run east and west?"

2. "What do you notice about the east and west lines? Frank, Hattie, and Walter, may put their fingers here. Each may follow his line, going east. Others may watch the fingers. Were they the same distance apart all of the time?"

Rosse, put on the board some lines that are the same distance apart throughout. What are such lines called? [Parallel lines.] Which lines on the globe have we just found to be parallel lines? [East and west.] And, because they are parallel, they are called a name which shows that. [Teacher writes *parallels* on the board and children learn to spell the name.] Trace the parallels again. And again."

3. Just as each street in Winona is named or numbered, so each parallel has a number. Starting at the equator (children have learned about the equator and know reason for its name), the men who first planned these lines made 89 parallels between the equator and the north pole, and 89 parallels* between the equator and the south pole. (Let children point to north pole, south pole, equator, and then tell how many parallels in each half.)

"As all cannot easily see the globe, I will draw a map on this board, and we can continue our study upon that. [Teacher draws large circle with arm for the radius, locates equator with colored crayon, and numbers it O—the starting point.] We have a street in Winona (Center street) from which the houses are numbered both ways. Just as we have 225 *east* Fifth street, and 225 *west* Fifth street, so we have a fortieth parallel *north* of the equator, and a fortieth parallel *south* of the equator, as the parallels are numbered from the equator both north and south.

"My map is too small for me to put in *all* of the parallels, so I shall put in only eight, letting you imagine the absent ones." (Teacher talks as she draws, explaining how to divide each quadrant into thirds, and then each third into thirds; how to connect the opposite points of division, making eight parallels; how nine parallels have been omitted between each two drawn, and hence the first shown must be numbered 10. Then derive from children the numbers for the other parallels, and for the point marking the pole. In the same way, put the parallels into the southern half of the map. (Figures 1 and 2.)

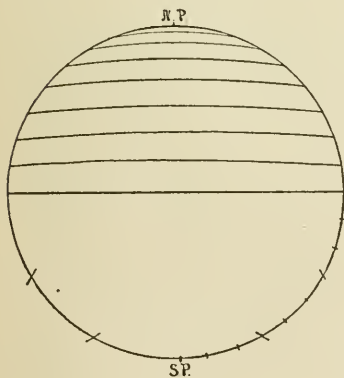


FIG. 1

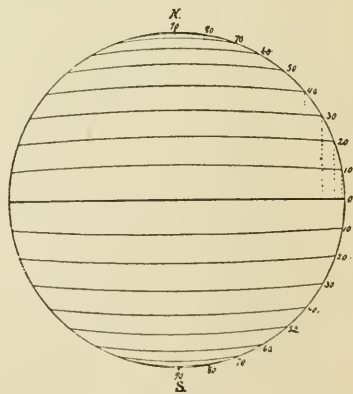


FIG. 2

Application of work so far done.—"Now let us see how we can use these 'streets' that we have called parallels. Each of us may select a 'street' upon which to live, and the others may try to find that street. I have decided upon mine. I live on parallel 40, north. Find." (Children tell, one by one, where they live, and others find. Many given by teacher, varying the form of ques-

* Parallels here understood to be one degree apart. Term "degree" not yet familiar to children.

tion, and using term *latitude* frequently; for example: "A friend of mine lives on the thirtieth parallel, south latitude; find.")

Other devices.—The teacher may vary the succeeding recitations by using some of the following:

1. Teacher makes x's on various parallels and children describe the location, seeing how few errors are made.

2. Teacher writes children's initials at certain places and children tell locations.

3. The teacher may write the descriptions of various locations, and let children locate them on the teacher's map, or on individual maps made by the children for seat-work. Teacher may give several *forms* of expression, such as: (a) Forty degrees north of the equator. (b) Forty degrees north latitude. (c) 40 degrees north latitude. (d) The fortieth parallel north of the equator. (e) 40° north latitude. (f) 40° N. Lat. Children locate by x's; or the descriptions may be numbered and children use corresponding numbers on map. The use of the word (and sign for) "degrees" may be taught by showing children that instead of saying, "We live on the fifth street from here"; we say, "We live five blocks from here." So I may say, "I live ten *blocks* north of the equator," rather than, "I live on the tenth parallel north of the equator." But these *blocks* are not like our city blocks, for each is nearly seventy miles long, and is called a *degree*. "Show me the 'Brown Baby's' home, which is thirty degrees south latitude"; etc.

4. If children have read "Seven Little Sisters," the home of each "sister" may be located.

5. Follow these lessons by some which will show locations of places *between* the *drawn* parallels. First use 35, 45, 15, 5, etc. Later take 29, 71, 63, etc., until children freely locate any place upon the right parallel.

After sufficient seat-work and class testing have been given to prove that pupils understand latitude fairly well, lead them to see that a hunt for a person living 40 degrees north would be worse than hunting for a person on Broadway in Winona, since the 40th parallel is almost 20,000 miles long, whereas Broadway is not over 3 miles long, whatever way we count it. "What does a hack driver need besides knowing Broadway, to find a man's house readily? [Number on house; or else the cross street, if the house is on a corner.] What would help us quickly to find one another on our parallels?" Children may answer "north and south parallels," or "cross parallels," or "cross lines." If the first or second, the teacher says, "Look at the globe and at your maps. Are there any cross lines? Let us see whether they are also parallel. [Let a few children trace, as was done with parallels; others watch.] Were the fingers the same distance apart all the way? [No. They all came together, at each pole.] These north and south lines are called *meridians*, but you could not now understand the reason for the name." (Teach spelling and pronunciation, and let children trace meridians. Then try both parallels and meridians to see that there is no confusion of names.)

"Let us now draw some of the meridians on our map. As with the parallels, we haven't room for *all*, so I shall omit nine between each two, as we did with the parallels." (Teacher explains as she works, dividing equator into halves, each half into thirds, and each one-third of the one-half into thirds again. Drawing the lines from pole to pole through the points of intersection will give the seventeen meridians *within* the circumference, the halves of which now make the two outer meridians.)

"As the equator divided the south parallels from the north, so we must have one meridian which will divide the east meridians from the west meridians. Long ago one such was chosen and called the *prime meridian*. I will help you about the meaning of *prime*: What is a *primer*? [Teacher writes word on black-board.] Yes, your first reading-book. What is the *primary* room at school? What do I mean when I say, 'These are *prime* oranges?' " (*First* class oranges.) (Older children may know of political meetings called *primaries*, of England's *prime* minister, and possibly of *prime factors*.) "Let us now look at these words I have upon the board. What likeness can you see? And what general meaning do we find in all? The *prime meridian* must mean——?" (The *first* meridian, or the starting point.)

"I will mark (with crayon) the prime meridian on our globe and then I want you to watch the globe while I turn it. Where do you now see it? [At the right.] Now? [We can't see it at all.] Later it will be seen appearing at the left,—approaching the front,—again at the right, etc. I should like to make the prime meridian on our blackboard map with colored crayon, as we did the equator. Which meridian shall I call prime? Could it be *any* one on my map? Why? Let us locate the prime meridian on our map, as the one on the globe looks to Walter, as he is now sitting. Walter may show us." (In succeeding lessons change the location of the prime meridian on the map, so that children will learn that it is not relatively *fixed*, as is the equator.)

"What number did we give to the equator when we talked about latitude? We shall give our prime meridian the same number. All of the meridians at the right of the prime meridian are said to be *east*, and all at the left, *west*." (Lead children to number the meridians, and to see that only half the globe can be seen at once, so that we must make two maps to show the entire surface. (Figures 3 and 4.) The outer edges coincide, so are numbered the same.)

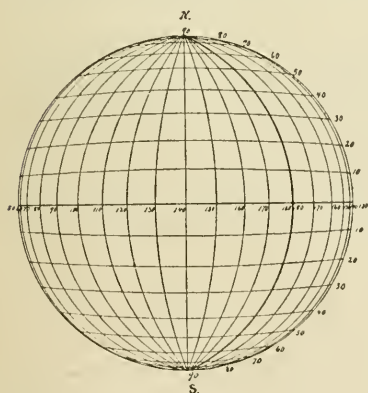


FIG. 3

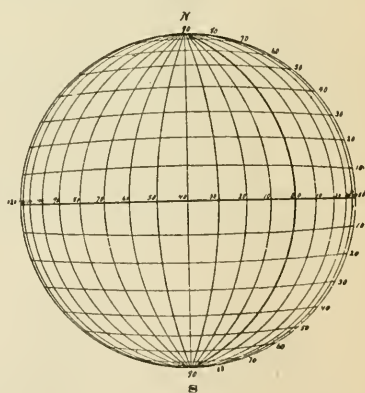


FIG. 4

Application of new work.—About the same plan as with parallels may be used, except that instead of drawing the pointer along an entire line to show a person's home, only one spot can be pointed out. Begin with "even" locations such as 70 degrees north and 20 degrees east. Later introduce the intermediate steps; for example, 55 degrees south and 20 degrees west; then 35 degrees north and 75 degrees west; then 61 degrees north and 37 degrees east, etc. Use term *longitude*, as teacher did *latitude*, so frequently that children learn its meaning by

association. When children are fairly familiar with use of map, give such locations as 90 degrees north, 25 degrees east; 0 degrees south, etc.

Each child should, at his seat, draw a map and correctly number the lines. Then the teacher may place upon the board ten statements of locations, using both latitude and longitude. Children will place corresponding letters or figures at proper points on the map. Children may do this as seat-work, or as a contest of speed, in class.

Another plan is to give children the names of from ten to twenty well-known cities, mountains, etc., and let them find the latitude and longitude of each. Later these could be marked upon the children's own maps. Or, reverse this, the teacher indicating the latitude and longitude where famous points of interest may be found and children find and name the city, lake, or river mouth.

For review the children may be asked questions to emphasize the differences and similarities found in:

1. Parallels and meridians.
 - a. Direction of, on globe.

Parallels are drawn east and west.
Meridians are drawn north and south.
 - b. Relative position.

Parallels are parallel.
Meridians meet at poles.
 - c. How numbered.
2. Methods of locating places.
 - a. Compare locating places in the country with locating places on earth's surface by means of "landmarks."
 - b. Compare locating city houses by street and number with locating places on earth's surface by means of parallels and meridians.

Children should conclude that parallels and meridians are necessary for accurate location of places on the globe; should know how they are drawn; and should know how to use them. If old enough to understand it, children should learn about the dropping or adding of a day, at the 180th meridian, and about change of time when traveling east or west. The topic of "longitude and time" formerly taught in arithmetic, is more sensibly taught here.

Thereafter, pupils should use latitude and longitude in locating places talked of, and will necessarily use latitude in discussing comparative climates of different countries.

B.—A LESSON ON THE GREAT BASIN.

(By MISS MABEL MARVIN, Winona.)

Aim.—What is man's problem in relation to arid regions in general and to *The Great Basin* in particular?

Review.—1. "Turn to the map on the wall. Find the coast region. The Sierra Nevada mountains. Can you anywhere find anything about the height of these mountains? [Children use the 'key' and find that the mountains are from 1000 to 6000 feet high.] Just what does this mean?" (Children explain.)

2. "The winds which blow from the west, pass over what water? Do they bring much or little moisture? Why?" (Each child gave a judgment, one after the other; then, later, gave reasons for that judgment.)

3. "Recall the experiment we made with the slates and our teakettle of boiling water. What happened?" (Children told how the cold slate caused rain, and how the hot slate dried up the steam so that it disappeared.)

4. "When the westerly winds, laden with moisture, reach the Sierra Nevada mountains (1000 to 6000 feet high), what probably happens? [Rain.] Which slope of the Sierra Nevada mountains gets the more rain? [West.] Why?"

5. "Is your inference correct—*does* it have much rain? How can you prove it?" (Oregon and Washington, already studied, are referred to by pupils as having much rain.)

Development.—1. "Turn to p. — of your texts. Put your fingers on the Sierra Nevada mountains. On the Rocky mountains. Note the region between these ranges and follow it north to the south branch of the Columbia river. Can you find that river? Then look towards the south until you find the Colorado river. Show the whole region. What bounds it on the east? On the west? On the north? On the south? Point it out on the wall-map."

2. "This region is called *The Great Basin*. [Teacher writes name on the blackboard.] Why do you think it is called that? [Children answered freely, It's a big valley. There are a lot of lakes in it. It's like a basin, high on the sides. There are lots of rivers and valleys in it.] What do you notice about the lakes and rivers? Find a river. Trace it to its mouth. Find another. Trace it. [Children all work, as teacher oversees and helps wherever necessary.] Where do all the rivers flow? [Into lakes. Not one flows into the ocean.] What must be true of the north and south rims of this basin?" (High, too, just as the east and west rims are, but not so high as they are.)

3. "Why is it called *The Great Basin*? [It is so large.] Can you find anything anywhere that would tell you the dimensions?" (Children supplement text by using scale, and find that the basin is about 500 miles long. This distance is then compared with known distances—100 miles from Winona to St. Paul, for example.)

4. "If Atlantic winds, laden with moisture, should come as far west as *The Great Basin*, what would happen to them? [They would drop their moisture on the east side of the Rockies.] Then what would be true of rain in *The Great Basin*? [Little or none would reach it.] Suppose a few clouds got past the Sierras or the Rockies, what would happen to them? Compare the situation with our hot-slate experiment." (The clouds would disappear. No rain would fall.)

5. "What does your map tell you of the surface? Look at these pictures of the region." (The teacher supplemented these by descriptions of the canyon-cut surface, of cacti, and of scenery in general, making very vivid pictures for the pupils to imagine.)

6. "What may we expect this region to produce? [Little vegetation.] Yes. For a long time it was called the Great American Desert. What relation does it bear to the East, and California? [Right between. On the road needing to be traveled.] Then what would naturally be built? [A railroad.] How many stations would there be? Why few? How many station-agents? How many trains a day? What would these agents do to use the time? [Ride horseback and explore.] As they explored, they discovered rich veins of minerals. What minerals were found? Use your books if you don't know. As soon as people outside the Basin heard of its mineral wealth, what happened?" (Migration into *The Great Basin*.)

7. "What occupations would naturally develop? [Mining in great quantity. Some farming to supply daily needs.] Why not more farming? [So little rain.]

Look at the Great Salt Lake region. What mineral is important there?" (By pictures and description, the teacher gave pupils vivid impressions of this region.)

8. "Let us make a comparison, step by step, of this region and the Coast Region which you have studied before." With a few suggestions and necessary questions from the teacher, the pupils put on the blackboard the following table of comparisons:

	<i>Coast Region</i>	<i>Great Basin</i>
<i>Moisture</i>	Plenty	Scanty
<i>Winds</i>	Moist	Dry
<i>Soil</i>	Fertile	Arid { Soil good but too dry.
<i>Vegetation</i>	Abundant	Scanty
<i>Products</i>	Agricultural products, gold	Minerals
<i>Occupations</i>	Fruit growing	Mining

Assignment (oral).—"Could people of The Great Basin ever have farming? [Yes, if they irrigate.] Are they doing so? Has the government helped any? How much? What is your opinion about this region's being a good *home* for people? What would you expect regarding cities? Many? Few? Large or not? Then you will have a good many things to think about for tomorrow, won't you? I shall be glad to see who has found out about them all."

(The next lesson clinched all done in this and added the suggested points.)

C.—A LESSON ON THE DRAINAGE OF MINNESOTA.

(By MISS HARRIET CARTER, Pittsburgh, Pa.)

Problem.—"How is the drainage of Minnesota related to the drainage of the United States and of North America?"

Review.—"In what physical division of North America is Minnesota? [The Great Central Plain.] How far west does this Great Central Plain extend? [Child called on each time, steps to the map and points as he talks.] How far north? East? South? [To Gulf Coastal Plain.] Within the United States, Minnesota has what position in this great central plain? [North central.] In all of North America, Minnesota has what location in reference to the Great Central Plain?" [Middle.]

Development.—"Does Minnesota's being in the 'middle,' or center, affect its drainage? Much or little? Let us see.

1. "The greater part of the drainage of this Great Central Plain, within the United States, is through what? [The Mississippi river.] What part of Minnesota is drained by the Mississippi river? Show on the map. [A little more than one-half the state.]

2. "Sketch outline maps of Minnesota. [Two boys named to do this.] Now add the rivers which flow into the Mississippi, even if they flow through some other state to reach the Mississippi. Where do the streams about Winona flow? Think of some creeks you know near Winona. In the spring, what is true of the ravine across the lake? [Water rushes down in torrents.] Into what does it flow? [The lake.] Into what does the lake drain? Then it all really does drain into —? [The Mississippi.]

3. "In what direction does the water that falls on the northern part of Minnesota drain? Into what? [Lake Winnipeg.]

4. "What is the boundary between waters called? [A divide]. Can you show me where the divide must be to separate these two systems of drainage?

Add the northern rivers to the two maps. [Other pupils called on to do this.] Indicate the divide on the map. [Child does.]

5. "But there is still another part of Minnesota at which we haven't looked. Which part? Point to it. Where do the waters of this northeast corner drain? [Some to the Lake of the Woods and from that to Lake Winnipeg. Some to Lake Superior.]

6. "Then we need another divide. Can you put it into our sketches?"

7. Teacher helps pupils to summarize work to this point: Minnesota lies in the center of the Great Central Plain, and as that is drained by three main streams (the Mississippi, the Great Lakes, and Hudson Bay), we naturally find in Minnesota the beginnings of all three systems of drainage. These are separated by the two main divides which were drawn, and one minor one.

Assignment.—"Are these divides high? How can you find out? Do so for tomorrow. What bearing will the drainage of Minnesota have on the State's industries? On its commerce? Tomorrow we shall take these topics.

VII.—DEVICES AND THEIR PLACE IN TEACHING.

A.—THEIR RELATION TO METHODS AND PRINCIPLES.

A *principle* is something so deep and so fundamental as to be most difficult of definition. Like an axiom, it is indisputable; yet, unlike an axiom, it lies so deep as often to be unrecognized as the propelling motive to some action.

As soon, however, as the principle makes itself felt, the individual, whether conscious or not of the fundamental cause, seeks some *method* of expressing the principle. Necessity produces one sort of method or invention. The instinct of curiosity which leads to experimentation and improvement on invention produces a second sort of method; the spirit of emulation, or of ambition to excel, may cause the development of a highly mechanical or scientific method; while parent love, sympathy, friendship, and faith in our fellows, will call out still different methods of carrying out a principle. An individual's instinctive love of variety causes him, in working out a method, to make a number of minor changes—*devices* which catch the attention of an observer, and often please or interest him.

Illustrations.—The fundamental *principles* of good dressing are (1) protection of the body, and (2) decoration. The *methods* of dressing vary for men and women, for Eskimos and Chicagoans, for the leisure class and for the working woman. And in any single narrow field, numerous *devices* appear, such as the military collar, the streaming tippet ends, the plain or the betrimmed sleeve, the short or long skirt, the bright or the sombre bodice, the "cut-a-way" or the "frock" coat.

Food is cooked because of the *fundamental need* of food's being palatable and digestible. Potatoes may be boiled, baked, scalloped, mashed, creamed, made into soup, or prepared to be both palatable and digestible by a dozen different *methods*. Scalloped potatoes, for example, may be served in individual ramikins or in one large casserole; may be garnished with parsley or with cheese; or may be made attractive by any other *device* the chef may invent.

The *principle* which underlies one's learning to subtract is economy of time and energy when finding the differences between numbers used in daily business. There are several *methods* of subtracting: right to left, left to right, Austrian, "borrowing," etc. A teacher may employ any one of several *devices* for helping her pupils learn any one of the methods: She may use toothpicks for presentation

of the plan and for use in doubt; she may have competitive drills for fixing subtractive relations; she may use blackboard or paper for solving the examples; and she may use the thermometer, or walking to the north or south of a given spot on the floor, or making spaces on the blackboard, to teach subtraction of positive and negative quantities.

These illustrations, better than definitions, serve to show the interrelation of *principle*, *method*, and *device*, and to point to the relative importance of each. That devices have a worthy place, none can deny. But that they should not outweigh method or principle is plain. Whether a woman wears a flower or a ribbon bow on her hat is of less importance than that she select a hat that is becoming and suitable; but still more important than the becomingness, is the need of having some sort of head covering, especially in cold weather. The momentous debates over methods and devices of teaching are parallel to the seasonal discussions over styles in dress. Both become matters of no consequence in the face of some really big principle of life. The mother whose child is ill thinks not for a moment of whether the dress she has on is one for morning or afternoon; she cares only to be dressed quickly that she may wait upon her child. The teacher who would build a character is not *primarily* concerned with whether the child knows a particular multiplication table, but *is* concerned over the chance there is in the learning of the table for the pupil to gain greater self-confidence, and strength to persist even unto victory. That these lessons can be learned from the building of a rabbit-hutch or the entire care of a horse or a cow, just as well as from the multiplication tables, every experienced teacher knows. And when those lessons are once learned they can be applied to the care of the horse or to the conquering of the tables, whichever one lost out in the original teaching.

All three—devices, methods, principles—are constantly needed in life, but their proper interrelations must be kept. Rings, and beads, and ribbons, are proper devices of dress; but a woman who wears too many strings of beads, flying ribbons, cords and tassels, and too much jewelry, has lost the sense of relative values and has violated a principle of good dressing. So teachers who become *carried away* by devices in teaching lose their perspective and forget principles: They teach the *device*, not the child.

The young girl who is just learning to cook spends undue time on the devices of garnishing or serving, and, if left alone, is apt not to have the meal on time, or the food hot; in the same way, the inexperienced teacher is likely to overdo device, and, when he visits a colleague, sees and tries to imitate the devices observed. Occasionally a young teacher visits one of experience and returns with "nothing seen" because no devices showed. One test of a teacher's growing power is the gradual discontinuance of *much* device. The greatest teachers of the world are bound down to no special method, to no particular equipment, to no set text-books. Like Socrates, Pestalozzi, and others less known to fame, they teach anywhere with any material. If "college education" can be defined as "a log with Mark Hopkins on one end and a pupil on the other," what ought to be the definition of an elementary school education?

B.—A FEW STAPLE DEVICES, WITH RULES FOR THEIR USE.

Devices are more needed in drill lessons than in either development or appreciation lessons. This is because the tendency in drill lessons is to emphasize the form rather than the content. Association of meaning and form will obviate

the necessity for any considerable number of devices. Nevertheless, some are always necessary. (See p. 231.)

Four Rules.—(1) *Devices should be easily understood* when quickly explained. For example, a teacher once worked out an elaborate scheme of playing croquet, putting a word at each arch, and a harder word at each stake. She used the device with second-grade pupils who did not know how to play croquet. As a consequence, the entire time was spent in teaching pupils how to play the game rather than in drilling on words. (2) *They should fit the lesson in hand*, not evidently be “dragged in.” At another time, the same teacher had a class reading the story of “The Clever Starling,” (the talking bird which was caught in a net with other birds.) She wrote on the blackboard a dozen words that might give trouble in the oral reading, calling for the meaning of each as she wrote it. Then she said, “Let us play these are birds, caught in this net (she quickly drew a chalk net over the words), and you may be the fowler who takes them out, one at a time. He does not want to lose any so all must be pronounced.” (3) *If devices can’t fit the immediate lesson, they should chime with children’s interests.* For example, if the circus has just been in town and pupils are engrossed in its interesting details, the teacher may “play” that the desired number combinations are animals in cages, and pupils must correctly name the animals pointed to, saying “twelve” if 3×4 or 6×2 is pointed to; or 8, if $5 + 3$ is indicated. A few quickly drawn vertical lines for “bars” are sufficient to create the atmosphere; finished drawings are here out of place. Again, near Christmas time, the number combinations, phonic stems, or words needed, can be written upon the branches of a Christmas-tree. (4) *Devices must not be worn threadbare*, just because they interest the pupils at first, or because the teacher does not want to bother to find new ones. Very slight changes are sometimes sufficient. If the ladder device is used (and it is always good), the ladder may be drawn on the blackboard, on a chart, or on the floor. Words, cities, number combinations, phonic elements, or whatever drill is being used, may be written on the rounds of the ladder, the child being able to climb the ladder successfully if he has firmly planted a foot on each round by answering correctly. If the ladder is on the floor, the words may be on the sides of the ladder, and the child try to walk on one side without falling off. Later the ladder may lead to the top of a wall; or to an apple-tree on which hang apples (harder words), or to a Christmas tree loaded with presents.

The device of putting the same kind of seat-work into a fresh cover such as a colored leaf, or a sunbonnet (cut from wall paper), or a large star, makes the work seem wholly new to children. A third grade was once seen to glow with pleasure over some familiar seat-work passed, for a change, in an attractive basket on whose handle a big bow of red ribbon had been tied. Not long since a young rural teacher was observed while she drilled third-grade pupils on the table of threes. All she did was to ask one pupil after the other to say the table in order, beginning with 1×3 . There was no life to the lesson, nor was this any proof that pupils knew 6×3 or 8×3 whenever seen. She needed a dozen “snappy” devices, such as flashing cards, calling the combinations in irregular order, having a “match,” or a “race,” or doing all possible in a given number of minutes. *Variety and snap are essential factors in drills.*

A few other staple devices.—1. The “Is it —?” game. The teacher writes number combinations on the board and then says, for example, “I’m thinking of a certain product (or sum).” A child points to 3×4 and says, “Is it 12?” The teacher says, “It is not 12.” Child points to 7×2 and says, “Is it 14?”

continuing until he guesses the correct product, or errs in naming the product of two factors to which he points. This can be varied in dozens of ways, to use with word and other drills as well as with arithmetic facts.

2. Keeping record of pupils' weekly abilities, by either the number done correctly in a given time, or the time taken to do a specified number of examples, or words.

3. "Racing" is always good. Two individuals or two groups may race. Two illustrations are given. (1) A large outline map of some country (say the U. S.) is on the blackboard or a sheet of tagboard. The children have learned some of the states, or the largest rivers or cities, or the locations of certain industries. The teacher sends two pupils, each with a pointer, to the map, and rapidly names five cities, for example. The child who first touches the correct spot for the location of at least three out of five cities named, wins for his side. (2) Two similar columns of names of states, cities, rivers, or of industries, may be on the board, but in different order. Let us take the last named. The two children are ready. The teacher says, "Done along the Columbia river," "Done in the southern states," "The cause of California's being settled," "Most famous in Colorado," or "Illinois and Iowa noted for." Each pupil points to the correct industry in his column, and, as before, the one who most often finds the answer first wins.

4. Take some maps from discarded geographies, trace the outlines with hectograph ink, and print a large number. Or save bits of maps, without names, from many sources. Cut a map into sections, so that each piece has some distinguishing feature. Mount each piece on a square of stiff paper. (Children like to prepare the cards themselves.) The teacher then "flashes" one card after the other and pupils name the part of the map seen. Or they may all *write* the answers, checking their work as the teacher slowly reshowes the cards, approving the correct names as one pupil after another reads his answer: "The southern part of Europe," "Florida," "Alaska," and "The eastern coast of Asia," are typical answers.

5. A "snow storm" which covers the words as fast as they are correctly pronounced, makes pupils happy indoors even though the first snow of the season tempts them to dream of school-close.

6. Rapidly rescuing people or furniture (words or number combinations) from a burning house, the whole made dramatic by a few red flames seen to be bursting from the roof, is great fun.

7. "Cleaning house" (erasing words known as they are pronounced), is a fine device for the very end of the drill, since the board is thus left clean for the next class.

8. "Fox and Geese," makes a fine game for securing rapid replies (to number combinations, for instance). The board contains many expressed operations. A child stands and says 6, 12, 21, 4, 18, etc. He may go in any direction he pleases but must keep in line; that is, he can't skip all over the board. As soon as another child "locates him," he stands. The "goose" stops; the "fox" steps to the board, pointing to the combinations and naming the same sums, products, differences, or quotients, as the "goose" named up to the time of his stopping. If correct, the "fox" becomes the next "goose" for another "fox" to catch.

A few devices for helping enunciation follow:

9. Say quickly and clearly,

(a) lā, lē, lī, lō, lōō

(b) dā, dē, dī, dō, dōō

(c) Repeat (a) giving each syllable four times, thus—la, la, la, la—le, le, le, le, etc.

(d) Repeat (b) giving each syllable as often as its place number indicates, thus—da; de, de; di, di, di; do, do, do, do; doo, doo, doo, doo, doo.

(e) On the tip of the tongue.

(f) Over the hills the farm boy goes.

10. Draw on the blackboard a triangle. Write ä, ē, ōō, at the three points. Sound each slowly, then more and more rapidly, but always separately.

Do the same with syllables, ip, ik, it.

12. Drop the vowel and give only the consonants in 11.

Texts, school magazines, and the teacher's ingenuity, will supply many other devices, if more are needed.

VIII.—TEACHING CHILDREN TO STUDY.

(INCLUDING SEAT-WORK FOR LOWER GRADES.)

Because seat-work has grown out of mere "busy-work," teachers have only gradually come to see that it is a valuable supplement to recitation-work and hence worth their careful attention. Since pupils, through seat-work, gradually acquire the art of studying, it should be prepared with as much care as is given to the preparation of the recitation. The program must be planned to permit seat- or study-work to be carefully assigned, and, when done, briefly inspected or else collected for correction. Directions, whether oral or written, should be simple, definite, clear, and precise, and capable of being executed as well as of being remembered.

The teacher should plan for a minimum amount of work for all, and add extras for children who are able to do more. For example, in assigning arithmetic problems, the teacher names a definite number for all to do and then suggests that perhaps some can do in addition a few named examples which are "hard." The tone implies that the extras are possible if only pupils are ambitious. Again, a history teacher was once heard to make this assignment: "We have all been studying the revolutionary period for some time now; you know characters on both the American and the English side; for tomorrow you may choose any character, man or woman, on either side, and plan to tell as many things about yourself as possible so that the rest of us can guess who you are." Then, slyly, "Of course the more books you read the harder you'll be to guess. You are welcome to any books on my desk, and most of you know how to use the library." The reader may well believe that the more capable and more ambitious pupils were kept just as persistently busy as those who had to give all their time and effort to meeting the minimum requirement.

A.—STEPS IN STUDYING.

Of the steps in the process of studying there are many organizations, and each teacher must finally make his own, first, to fit all study; and, second, to fit his particular grade. As a starting point, the following five steps are suggested, each to be briefly discussed later: (1) Recognizing or setting the problem; (2) planning the solution; (3) solving the problem; (4) checking the result; and (5) applying the newly-found knowledge to other situations. In general, steps (1) and (3) are the ones to be emphasized in primary grades, steps (2) and (4) the new steps to work on in intermediate grades, while in grammar grades, step (5) may be consciously added to the other four.

1. Before any real work can be done the performer must know towards what he is driving; or, in other words, must have a more or less specific aim, must see that there is a problem before him, must feel the need of overcoming some obstacle. Life in the form of our daily work, our fellow citizens, our superior officers (of children, this means teachers), or, perhaps, our social duties, usually sets the problems for us, and we only need to have our eyes open to sense the problems. Some people live with broken windows, falling fences, doors hanging by one hinge, or other forms of disorderliness without ever recognizing them as problems. People of opposite temperament would recognize these problems instantly, and, just as promptly, begin to solve them. From first grade up, pupils must be helped to see their problems, only gradually learning to do that more-difficult task, set their own problems; that is, not wait to be told what to do, but to "carry the message to Garcia" without need of oversight.

2. The second step is to plan how to solve the problem, to select the proper materials or tools and the best method of procedure to employ. This demands judgment of things, of worths, and of action. It demands memory, imagination, and organization. Thought must be supplemented by more thinking, by reading, or by asking other people's opinions.

3. After the solution has been planned, the third step, doing the task, must be taken. Many find this the hardest step of all, for the actual doing of a planned task almost always involves drudgery, monotonous repetition, or mechanical detail. Illustrations as in getting a meal, in making a dress, in finding how many seconds old I am, etc., are very numerous. The planning is dramatic; the execution, apt to be tedious. It is, therefore, a big problem of our schools to teach the power of perseverance, persistence, or stick-to-it-till-done attitude to pupils. It is here that teachers and parents need devices for holding children to their tasks without taking from them the real joy of having conquered in spite of weariness or lack of interest. From first grade on, pupils must be held to finishing work that is begun, though, of course, work given should fit the pupils' ability to do, and it is therefore quite essential that the teacher have a minimum standard which can be reached by even the poorest child who yet is "up to grade," with just enough extra work planned to challenge the effort of the better pupils. If pupils have been asked to name five cities which manufacture cloth they must be held to naming the full five. If the teacher has suggested that perhaps some pupils can name five cities which manufacture cotton cloth and five which manufacture woolen cloth, (or silk, or velvet, or linen, as the case may be,) the pupils who *attempt* this task should be required to *complete* it. To attempt more than is required should not be counted so satisfactory as to do what is required perfectly.

4. Having solved a problem, students need next to assure themselves that they are right. From having their work approved by others to being able to check it themselves is a long journey, but is a journey well worth conscious effort. To be able to check one's own work, a person needs (a) to keep in mind his aim, (b) to know at least one other method of procedure, (c) to have a standard or ideal of what the result will be, and (d) be *willing* to do the work again, or have a pride in wanting to be certain of himself. Care, despatch, and accuracy, are traits of character which this step will engender.

5. Having checked one's self so that he feels sure of his knowledge, his sympathy, or his power to do, an individual is ready for the last step—using his freshly acquired ability or information under new circumstances. As he does this he grows in alertness to see a problem or to set one, in executive ability, and in general efficiency. He becomes an expert in his field. With advancing years he is able to generalize from wide experience and so becomes a real *philosopher*.

Though every step is present in every grade, the earlier suggested points of emphasis must be kept in mind.

To make younger pupils see their problem, (1) the seat-work must be assigned to meet immediate interests, to fit directly into the regular daily work of the schoolroom. It must usually fix, by practice in one or more media, the new experience that the child has had. For example, if he has been led to discover the additive combinations in five, his seat-work should clinch the knowledge discovered by building five with stars, pegs, corn, pictures of pets or toys, etc., or by using the number symbols to fix the combinations. It may, on the other hand, occasionally demand effort in unfamiliar fields for the sake of exciting the child's curiosity, or of preparing him to appreciate something which is to be presented later. The child must also have opportunities (2) to do the same kind of work often enough to secure control of the mechanical side of seat-work. That is, he must cut, paste, arrange tablets or letters without spilling, use taste in selecting color combinations and in spacing his work, copy carefully, or do whatever is required at frequent enough intervals to insure growth in neatness, accuracy, speed, or arrangement of his work.

To secure perseverance or steady application to a task, and to prevent any tendency towards dawdling or idling, the study or seat-work must have two seemingly conflicting qualities. It must, first, be easy enough to insure its accomplishment, to bring to the child the feeling of *success*; that is, it must be selected to fit the child's ability to do. Second, it must be hard enough to challenge the child's best effort. He must feel that it is worth while doing, or his ambition atrophies.

To make somewhat older pupils add to these first and third steps, the second step (organization), and the fourth (checking results), the teacher must give for seat- or study-work tasks which demand picking out essentials, weighing values, outlining, paragraphing, composing problems from statistics, doing group-work which checks individual accuracy and methods, and tasks that continually function in a larger whole and hence are correctly evaluated.

To help eighth-grade (and older) pupils in learning to use their knowledge, the teacher has to be clever in devising means to throw children upon their own initiative in solving problems. Children need to catch a teacher's spirit of ingenuity and expediency. For example, if a schoolroom shelf has to be put up and made level without the usual spirit-level, what are all the possible means to use? These are some of the answers once given: Make a "level" of a small bottle. Use a tumbler of water, pasting a strip of paper on the glass. Measure up from the floor in two places. Move the shelf until a marble rolling on it will prove that it is "level." (This last suggestion came because a marble was the substitute quickest to get, after some fixtures were seen to prevent equal measurements.)

B.—MATERIALS AND THEIR USE.

Since, during the first few school years, the teacher sets most of the problems and supplies most of the materials with which pupils do their work, primary teachers are usually on the lookout for suggestions as to materials and their use. (Since space forbids a lengthy list only a few are given below.)

From fourth grade on, the pupils' text-books and reference reading supply most of the material used. Map making, composition work, dictionary work, problems in arithmetic, geography, and history, fill the bulk of the study time.

A book like McMurry's "How to Study," is a valuable aid to teachers of upper grades.

MATERIALS USEFUL OR NECESSARY FOR SEAT-WORK.

1. Papers of all kinds—regular school papers, colored papers for weaving and folding, tissue papers, papers for cutting and for card-board modeling, etc., down to plenty of clean newspapers.

2. Pencils, crayolas, pens and ink, and brushes and paints, with their necessary accessories.

3. Modeling-clay or some substitute such as soaked and mashed paper, or a preparation of flour or starch and salt (often used for relief maps).

4. Scissors.

5. Rulers.

6. Weaving materials—yarn, rags, raffia, carpet warp, etc.

7. Alphabets, words, and sentences in boxes.

8. Numbers and number signs in boxes.

9. Collected materials—seeds, moss, pressed leaves, advertisements, colored pictures, seed catalogues, toys for models in handwork, old text-books for cutting up, and so on without limit.

10. Sets of standard tests. (See pp. 292-295.)

11. A sign printing-press if possible. (Any supply house sells one of good size for about \$1.50. A small one for some kinds of work can be bought at a five-and-ten-cent store.)

12. Paste which can be made inexpensively by teacher or pupils. Several recipes are given, since children sometimes want to work at home when a cooked paste cannot be conveniently made.

No. 1.—Will keep for weeks if sealed in ordinary fruit-jars:

1 pint flour.	Put on to boil two pints of water and the
3 pints water.	alum. Mix the flour with the remaining pint
1 tablespoonful powdered alum.	of water, as mother makes a gravy "thicken-
1 teaspoonful oil of cloves.	ing," avoiding lumps.

When the water (with alum) is boiling, slowly add the "thickening," stirring constantly, and letting the whole cook until clear like starch. Add oil of cloves and seal.

No. 2.—Similar to above, but different in proportions:

$\frac{1}{2}$ pint flour.	
2 pints water.	Mix as above. Cook 20 minutes in
1 tablespoonful powdered alum.	double boiler. Strain.
10 drops oil of cloves.	

No. 3.—Cooked starch (made from either starch or flour) left by the laundress can be used for a few days. When much paste is desired for immediate use, laundry starch is the cheapest kind to make.

No. 4.—Scrape or grate one small potato; add boiling water enough to make it clear like starch and continue to cook four or five minutes.

No. 5.—If eggs are being used in cooking, the small amount of white left in the broken shells will supply all of one's day paste needed by children at home.

No. 6.—Gum tragacanth dissolved in water makes a good paste for thin papers. Oil of cloves added will preserve it.

No. 7.—A teaspoonful of ordinary flour mixed with cold water to a moderately thin paste will serve in an emergency.

13. A hectograph or some other duplicating contrivance.

A HECTOGRAPH RECIPE.

2 ounces best French gelatine.	Put all into double boiler and cook
1 ounce sugar.	until thoroughly mixed, stirring as
$\frac{1}{2}$ pint water.	gently as possible.
1 pound glycerine.	

Strain through old dampened cheese-cloth into a shallow pan. Set in a level place, covered from dust, for at least 24 hours before using.

DIRECTIONS FOR USING A HECTOGRAPH.

1. With hectograph ink, purchasable at any stationer's, write or draw the work to be duplicated. 2. It is economy of time and of gelatine to have paper the full size of the hectograph and always to print a filled sheet. Therefore plan to use all the space by looking days ahead to some desired seat-work, drawing, design, or language anecdote, with which to complete a nearly filled page. 3. Moisten the gelatine-pad very slightly by wiping its surface with a damp (not wet) sponge. 4. Turn written matter down upon the pad and let remain from one to four minutes, according to number of copies desired. (It wastes gelatine to let original sheet remain longer than necessary.) 5. Mark the corners of the sheet by small strips of paper so the duplicate copies may all be "square." 6. Remove written sheet, and rapidly put on one blank sheet after another until the desired number of copies is obtained. One can print 30 to 40 copies with ease, and as many as 125 copies by taking care (a) to write heavily; (b) to let original copy remain on the pad some time; (c) to work rapidly at first and more and more slowly later. 7. When through, wash pad in very hot water, removing all signs of ink. Either by washing or by remelting, level the gelatine, and set away covered. A pan of good tin, about 10 by 14 by $\frac{3}{4}$ inches, and made, with a fitted lid, is most serviceable. Such a pan costs about fifty cents.

CARE AND DISTRIBUTION OF MATERIALS.

1. Keep all materials in labeled boxes or envelopes so children can readily find them. Replace each time in proper place. Clean and dust often but keep neat all the time. The best lessons in neatness can be taught by example.

2. Dispense materials economically, helping pupils to see the need for this, thus teaching them thrift.

3. Make the post of monitor a coveted one, earned by neatness, quietness, common sense, or dependableness.

4. Have all the heaviest passing or collecting done by monitors and teacher at intermission.

C.—VALUABLE SEAT-WORK FROM DISCARDED TEXT-BOOKS.

Excellent seat-work can be prepared from discarded *arithmetics*, *geographies* (using maps and pictures as well as reading material), and *histories*, but since there is not space for all, only a discussion of seat- and study-work possible to prepare from *old readers* is given. Much of this can be done *before* the first day of school.

NOTE: Wherever it can possibly be done, let pupils do the selecting, cutting, mounting, arranging, and labeling, of envelopes or boxes. The list does not pretend to be exhaustive, but only suggestive.

I. *When books are used intact* (so books may afterwards be "exchanged" or sold for a small sum).

A. Pass for children who are through other work to use in one or more ways, for example:

1. Select a story you would like to hear read aloud.
2. Select a story (or poem) you would like to read to the class.
3. Give the pages on which you find stories about—
 - a. Dogs, cats, horses, cows. b. Wild animals. c. Birds. d. Flowers, trees, etc. e. Kindness to older people. f. Courage.
 - g. Love of home or parents or sisters. h. Kings and queens, or princes and princesses. i. Fairies. j. Giants. k. Indians.
 - l. Some geographical topic being studied. m. Some historical topic being studied.

Of course the title selected under "l" and "m" for any one child or for any one lesson or text-book must fit the book in hand, or the child's interests, or the topics desired to be looked up.

This is helping the child organize the book and giving him a motive for extra silent reading. The teacher may use this information in a card catalogue for the room—a catalogue of topics commonly needed in that grade. Or pupils may be making themselves booklets on different topics into which they put the reference pages.

4. Underline words on certain designated pages, to suit age of pupils, for example:
 - a. Words of two, three, etc., syllables. b. Words beginning with c sounded like k. c. Words beginning with c sounded like s (then contrast these and note rule for c's being soft before e, i, y). d. Words containing port (to carry) or fer (to bear) as export, transfer, defer, etc. e. Words containing certain phonic stems, as ick, edge, ight, ack, etc. f. Words ending in ing. g. Words beginning with any desired letter. h. Words that indicate in general *good* qualities; e. g., good, bright pretty, sweet, happy, gay, cheerful, plentiful. i. Words that indicate contrasting qualities—bad, dull, ugly, sour, sad, sorrowful, glum, scanty. j. Action words. k. Nouns, or verbs, adjectives, adverbs, etc., for an older class.
5. Name the paragraphs or sections of certain designated stories or descriptions and write names on the margins.
6. Find the humorous parts.
7. Read the story and be ready to give or write the gist of it in 20, 30, or 50 words.
8. Read a designated story and then write an original story along the same lines.
9. Read a story and then write any story you've ever heard, of which this reminds you.
10. Copy from some one story all words meaning just one (singular nouns). Make each mean more than one (plural).
11. Copy all the plurals in a given story and then write the singulars.
12. Copy the verbs and make all present tense, past tense, future tense, for example.
13. Copy the adjectives or adverbs and write the corresponding adverbs or adjectives.

II. *When books may be cut up.* (Usually, but not always, two books of one sort will be necessary, so the complete stories can be mounted.)

A. Pictures.

1. All full-page pictures and such smaller pictures as do not interfere with stories to be saved may be carefully trimmed and mounted and used in some of these ways.
 - a. Cut into sections to be used as puzzles to be put together again—each cut-up picture in its own envelope, on which should be marked the number of pieces and perhaps the title and number corresponding to number on back of each piece. (Thus, if pieces are dropped on the floor, the correct envelope can be quickly found.)
 - b. Several pictures put into envelopes and accompanied by printed words suggested by the pictures; children match words and pictures.
 - c. One picture and several words suggested by it put into envelope.
 - (1) Children lay words on correct parts of picture.
 - (2) Children make sentences containing the words—sentences which would fit the picture.
 - (3) Children write a story suggested by the picture, using as many of the words as possible.
 - (4) Words arranged alphabetically.
 - (5) Words arranged according to sequence of ideas, as suggested by the picture.
 - d. Pictures used as suggestions for children's drawings, paper cuttings, etc.
 - e. Black-and-white pictures colored with water-color paints or with crayolas.
 - f. Characters in pictures named.
2. Pictures put into envelopes with definite questions to fit each picture. For example—



"CAN'T YOU TALK."

By Permission of The Perry Pictures Company, Malden, Mass.

- How many living things in this picture? Name them.
 Which do you like best? Why?
 Which is the oldest? How do you know?

Which is the youngest? How do you know?
 What time of the year is it? What makes you think so?
 Make a list of all the things being done by any one in the picture.

What sounds can each make?

3. Picture put into envelope with complete sentences from a story about the picture. Children arrange sentences in sensible order to fit the picture.
 4. Pictures saved for children's A B C booklets, or "animal" booklets, or "My Book" booklets.
- B. Stories or poems as wholes—mounted on one side only of cards, neatly cut and large enough to permit a good margin, put into large envelopes, numbered and perhaps labeled.
1. Children who finish work permitted to get and read stories.
 2. If stories are not named, children find good names, and when several have been found (in a fortnight or a month) children read story aloud and vote on the best title, by which the story is thereafter designated.
 3. Each story or poem accompanied by questions to be answered. (Some suggestions in the Coast-Guard lesson, pp. 241-245.)
 4. If stories are short, such as anecdotes, incidents, or fables, each may be treated in many ways.
 - a. Find a name to fit it. b. Give the gist of it in one sentence.
 - c. Outline it. d. Illustrate it with drawing, paper cutting, etc. e. Write it in your own words. f. Copy it, supplying a word which means the same in place of every word you can. g. Learn the anecdote so you can tell it. h. Be ready to tell a similar incident of your own. i. Change the person from third to first, or *vice versa*. j. Change the tense.
 - k. If people talk, change direct to indirect quotations, or *vice versa*.
 5. In longer stories, let pupils—
 - a. Tell at what points changes in the thought occur. b. Whether the story is liked or not, with reasons for decision. c. Give the five (or any number of) main points of the story. d. Make the story into "chapters" as in a book, and name each chapter. e. Pick out words and phrases pleasing to the ear. f. Pick out all the newest words or expressions.
- C. Stories cut into paragraphs or sections, and poems cut into stanzas or sections, and each section mounted on a card with a margin. Children may then be given envelopes containing all the sections of one story, or each child may receive but one section. Suggestions follow:
1. Arrange the sections to make a consecutive story.
 2. Name each section.
 3. Be ready to read your section so well that when every one reads there will be no break; let it seem like one person reading.
 4. Guess what comes before and after your section.
 5. Write the ending as you think it will be. As you wish it might be.
 6. Copy all the words in your section, grouping them by syllables.
 7. Same, arranging words alphabetically.

8. Rewrite your section—

- a. In your own words. b. Supplying synonyms wherever possible. c. In changed person. d. In changed tense.

9. Copy ten words:

- a. The hardest. b. The longest. c. That begin with —. d. That end in —. e. That you like.

10. Take the ten words and write for each some associated word:

- a. By likeness. b. By contrast. c. Whole if part is given; *e. g.*, door, if knob is named. d. Part if whole is given. e. Function if object is named; *e. g.*, clock—to tell time. f. Material, if object is known; *e. g.*, apron—cotton, cloth, gingham, calico, or lawn. g. Rhymes; *e. g.*, grow, snow, throw, sew, etc. h. Sounds made if animals are named; *e. g.*, dog, barks; horse, neighs. i. Object used where: Cup, in kitchen; knife, at the table; table, in the library.

(See suggestions for use when books are *not* cut up, many of which can be used for cut-up stories as well.)

D. Sentences, word lists, words, and alphabet letters.

1. Paste sentences on a card with enough space after each sentence for child to fill in one sentence.

- a. Sentences kept whole and put in envelope with card. Children to lay on card sentence just like the one above.
- b. Same, only sentences are cut into words or phrases and must be matched with wholes, part by part.
- c. Same, only words are cut into letters from which sentences must be built up.

2. Write sentences on a card and children find printed sentences, as above, to correspond.

3. Children find pictures to fit sentences, or make pictures to fit them.

4. Word lists often found at the beginning or end of a lesson, or found at the end of a reader, may be mounted on cards for children to use.

- a. Copy list. b. Rearrange list by length of words. c. Rearrange by meanings. d. Rearrange alphabetically. e. Match list from loose words in envelope. f. Same from loose letters. g. Match with synonyms. h. Write corresponding antonyms. i. Write as long a list as possible suggested by the hardest word. j. Ditto by the longest word. k. Ditto by the word you like best.

5. These same lists need not be mounted, but may be given to pupils to cut up and paste in their "dictionaries"—little folded booklets of 26 pages, with one letter of the alphabet on each page and under that letter only words beginning with it. Of course the words can't be in perfect alphabetical order because they will be collected at different times. These "dictionaries" may be used, later, for word drill, spelling lessons, phonics, etc.

Adapting a mother's story of how she entertains her convalescent boy, a teacher may for an occasional study period let pupils cut up readers or magazines to illustrate a story which the teacher or some child has put upon the blackboard. For example:

Once there were a father and a mother and their two little boys. (Each time we vary the family to suit ourselves.) Here the children stop to find a

picture of a house for the family to live in—sometimes it is a big farmhouse, sometimes a beach cottage, and sometimes children even choose a boat; this is cut out and pasted in a book. If we are to be in the country we hunt for a picture of a barn and all the animals that belong to a farm. After they are all pasted neatly we continue reading the story, illustrating as we go on. We tell what one day with this family is like, or we have them go on a picnic. There is a great deal of amusement in finding pictures of what they carry for their luncheon.

With a few suggestions on the teacher's part any child will enjoy making up the story, putting in all sorts of adventures, and since there is no end to the things that our family does, it is always a delight and a lasting amusement.

7. Similar work may be done for booklets on—

- a. The Kitchen. b. The Dining-Room. c. Our House. d. The Circus. e. The Barn. f. My Playthings. g. My Pets, etc. h. Last Vacation, etc.

8. From the pages not otherwise needed, pupils can cut sentences, words, and letters, with which to fill spool-boxes or heavy envelopes for seat-work.

IX.—MEASURING RESULTS IN EDUCATION.

For somewhat over ten years students of education have been making more or less scientific measurements of educational results and critical studies of school conditions.

For those who want to make a careful study of the whole movement, much literature is available. The early work, necessarily crude and unsatisfactory because it broke virgin soil, deserves students' attention for the same reason that pioneer work does in any field. Later efforts have been widely scattered over the United States and published in so many different forms that it has been virtually impossible for teachers in service to keep up with the literature. Dr. William S. Gray is printing some summarizing articles in *The Elementary School Journal* for 1916-17,* while Dr. M. E. Haggerty, head of the Bureau of Coöperative Research, University of Minnesota, is now working on several tests, hoping that many teachers during the current school year will assist him in giving these tests and in checking the results of Minnesota school work in spelling, reading, grammar, language, composition, and handwriting. He will issue bulletins from the University. The Northwestern School Supply Company will print or sell at low cost all tests used by Dr. Haggerty or mentioned in this Manual, but all communications should be addressed to the Bureau of Coöperative Research, University of Minnesota.

Teachers who wish to *begin* a study of standard measurements will find the following references valuable. The pursuit of all sources mentioned in these will soon open wide many other doors:

1. The Fourteenth Yearbook of the National Society for the Study of Education—Part I—78c—University of Chicago Press.

2. Consult list of Teachers College (N. Y.) publications, selecting the numbers dealing with measurements.

3. Consult contents of *The Elementary School Journal* (formerly *Teacher*), University of Chicago Press, for the last two or three years.

4. Scientific Management in Education, J. M. Rice, (1912); Hinds, Noble, and Eldredge.

5. Secure reports from a few of the many cities having made surveys during the last few years: Springfield, Ill.; New York City; Cleveland; Kansas City; Boise, Idaho; etc.

6. Watch *School Education* for Dr. M. E. Haggerty's bulletins and reports.

* Reprints of these can be obtained for 5c a copy from Dr. Wm. S. Gray, University of Chicago.

Believing, however, that the great majority of teachers care less about the history of the movement and the scientific methods of deriving scales than they do about the values to be secured and the actual methods of administering tests, the remainder of this article will confine itself to a brief discussion of the last-named points, and to only such references as are immediately essential and have not been named before.

REFERENCES FOR AVAILABLE TEST MATERIAL.

A. *General Mental Ability.*

1. Kuhlman—Revision of the Binet-Simon System for Measuring the Intelligence of Children; Dr. F. Kuhlman, Faribault, Minn.; 25c.
2. Yerkes, Bridges, and Hardwick—A Point Scale for Measuring Mental Ability; Warwick and York, Inc., Baltimore, Md.; \$1.25.
3. Terman—Measurement of Intelligence; Houghton, Mifflin Co., \$1.60.

B. *Quality Scales for Use in Rating Children's Handwriting.*

1. Thorndike—Teachers' Estimates of the Quality of Specimens of Handwriting; *Teachers College Record*, November, 1914; Teachers College, N. Y.; 30c.
2. Ayres—A Scale for Measuring the Quality of Handwriting of School Children; Russell Sage Foundation, N. Y.; 10c.
3. Freeman—The Teaching of Handwriting; Houghton, Mifflin Co., Boston, 60c.
4. Johnson and Stone—Measuring the Quality of Handwriting; *The Elementary School Journal*, February, 1916; University of Chicago; 20c.
5. Haggerty, University of Minnesota. (Ready in October.)

C. *Arithmetic Tests.*

1. Courtis—Efficiency Tests; S. A. Courtis, Detroit, Mich. (Write Dr. Haggerty.)
2. Courtis—Standard Practice Tests; World Book Co., Chicago. (Price list sent on request.)
3. Thompson—Minimum Essentials; Ginn & Co., Chicago; 90c and \$1.00 for 500 sheets.

D. *Reading Tests.*

1. Thorndike—The Improved Scale for Measuring Ability in Reading; *Teachers College Record*, November, 1915, and January, 1916; 40c each.
2. Gray, Wm. S.—Methods of Testing Reading; *The Elementary School Journal*, January and February, 1916; 20c each.
Sheet tests, 50c a hundred for either oral or silent reading tests.
3. Kelly—The Kansas Silent Reading Tests; Bureau of Educational Measurements, State Normal School, Emporia, Kan.; 35c a hundred.
4. Jones—Phonetic and Sight Word-Tests; R. G. Jones, Rockford, Ill.; \$2.00 for complete set to test 100 pupils.
5. Dr. M. E. Haggerty—University of Minnesota.
6. Haggerty, revised Thorndike tests in Indiana University Report.

E. *Spelling Tests.*

1. Ayres—Measuring Scale for Spelling; Russell Sage Foundation, New York; 10c.
2. Buckingham—Spelling Ability: Its Measurement and Distribution; Teachers' College, New York.
3. Jones—Concrete Investigation of The Material of English Spelling; University of South Dakota, Vermilion; 10c.
4. Haggerty. (Address above.)

F. *Language, Composition, and Grammar Tests and References.*

1. A Course of Study in Grammar Based on Kansas City Survey; Charters and Miller; University of Missouri Bulletins, Vol. 16, No. 2.
2. Briggs—*Teachers' College Record*, September, 1913.
3. Trabue—Completion Test Language Scales; Teachers' College.
4. Rice—Scientific Management in Education.
5. Boise Public Schools, Special Report, June, 1915.
6. Hillegas—A Scale for the Measurement of Quality in English Composition by Young People; *Teachers' College Record*, September, 1912; 30c.
7. Hosic—Chapter VII of Fourteenth Yearbook.
8. Haggerty. (Address above.) (Language, Grammar, Composition, ready by October.)

G. *Geography and History.* (Reference only.)

1. Bagley—Chapter IX of Fourteenth Yearbook.
2. Mayberry—in March, 1916, *The Elementary School Journal*.

H. *Drawing Scale.*

1. Thorndike—The Measurement of Achievement in Drawing; *Teachers College Record*, November, 1913; 30c.

VALUES OF MEASURING RESULTS.

- A. To the Community:
 - 1. In learning local conditions.
 - 2. In discovering local needs.
 - 3. In bettering local methods and administration.
 - 4. In placing education on at least an equal plane with other community activities—fully as worth measuring as the temperature, or the gas, water, and electricity; certainly worth as much attention as the motions made by girls in folding handkerchiefs, or of workmen's efficiency in a dozen fields.
- B. To the School as a Whole:
 - 1. To insure cumulative effect through the grades.
 - 2. To eliminate waste due to poor equipment, poor methods, or poor personalities.
 - 3. To produce pride in growth.
- C. To the Superintendent:
 - 1. To know his school in all its parts.
 - 2. To plan better courses of study.
 - 3. To plan a better system of administration.
 - 4. To supervise teachers more capably.
 - 5. To rate teachers more justly.
 - 6. To examine pupils more effectively than by former methods.
- D. To the Teachers:
 - 1. To secure greater coöperation and unity of purpose.
 - 2. To grow in teaching power—
 - a. Finding better methods; b. eliminating nonessentials; c. developing breadth of view; d. increasing self confidence—(1) because of objective instead of subjective standards; (2) because the measures are definite rather than vague. (No longer is one class merely "better than last year's class," but it is exactly so much better by some scale, however crude that may be.)
 - 3. To grow in appreciation of scientific articles now so numerous in current literature.
- E. To the Pupils:
 - 1. To know their individual, class, and school ranks.
 - 2. To take pride in improving.
 - 3. To feel confidence in what they know and can do.

HOW TO ADMINISTER TESTS.

In general, each purchasable set of tests is accompanied by very definite directions, by sample score-sheets, and by all material necessary for making a good test. The novice, who naturally wants his school to appear well, is apt to become nervous, and sometimes unwittingly fails to give an *honest* test. The first rule to follow is: Make the conditions normal and give a perfectly fair test. It is the present status of efficiency that teachers want to learn, so that they may know on what phases to work for improvement. The later tests *which show growth* are the valuable ones, if they, too, are honestly given.

Freeman's article in February, 1916, and Mayberry's article in March, 1916, of *The Elementary School Journal*, are helpful along this line.

MINNESOTA COURSE OF STUDY STANDARDS.

The only definite standards set are found under Penmanship, one of the subjects easiest to standardize. Recent Ethical Culture School (New York) experiments corroborate what, from personal experience and from observation of many classes of pupils, the writer believes, namely, that there is a natural period of pride in penmanship at about the age of 11 or 12. Because the writer also believes that wherever possible the rise of an interest should be utilized, penmanship is not forced until about fifth or sixth grade. As is frequently said, the entire course is merely suggestive, local communities being urged to adapt and not to adopt the state course as it stands. Hence, those who feel that the minimum speed standards set are too low, can easily alter them. Although the quality standard is in all cases left to the community, the speed standard parallels it in a general way.

The following table of comparisons of speeds clearly shows the writer's position:

COMPARISON OF PENMANSHIP SPEED STANDARDS FROM SEVERAL SOURCES.

(All reduced to "letters in a minute"; decimals omitted.)

	GRADE						
	II	III	IV	V	VI	VII	VIII
Minnesota Course of Study. Minimum standard only. Less demanded than in some scales until the natural acceleration period in fifth- and sixth-grades is reached; then just as much or more.	20-30	25-35	35-45	45-60	60-75	75-85	85-95
Courtis. Penmanship in Original Work. Words reduced to letters, counting 3½ letters to a word. From p. 56 of the Fourteenth Yearbook .....	.....	31	42	49	56	59	63
Courtis. Penmanship in Reproduction. (Ditto remarks above).....	.....	38	49	59	66	73	80
Cleveland Survey. Shows wide variations found in four upper grades only. These are class averages, hence do not show individual variations from 2 to 129 letters a minute. From pp. 64-69, Judd's Report .....	.....	.....	.....	39-83	47-93	45-90	46-101
Freeman. Fifty-six cities tested. From p. 63 Fourteenth Yearbook	37	44	51	59	63	70	73
Freeman. Group selected for speed. From p. 66 Fourteenth Yearbook	45	53	60	68	72	80	94
Freeman. Proposed Average Standard. From p. 76 Fourteenth Yearbook	36	48	56	65	72	80	90
Freeman. Proposed minimum to maximum standard. From p. 150 of <i>The Teaching of Hand-Writing</i> ...	30-40	40-50	50-60	60-70	70-80	80-90	90-100

X.—DISCIPLINE.

(A few positive statements for the sake of brevity.)

A. *Discipline should mean the securing of right conduct as an expression of right attitude on the part of the child.**

1. But, do secure right conduct—set a standard! To wait until the child feels like doing right won't teach him what is right. He must first

* For this definition and several points that follow, the author is indebted to Keith's *Elementary Education*.

get the ideals or standards of the group in which he lives. Let him know what your standards are.

- a. Use suggestion as a first means. Illustration: "I wish every paper could look as neat as this one" (showing an approved paper).
- b. Use direction, if suggestion isn't sufficient. For example, "Each child must hand in a neat paper."
- c. If neither suggestion nor direction secures the desired result, resort to punishment of the delinquents.
 - (1) Mean what you say, and prove it to the pupils.
 - (2) Be insistent on adherence to the standards set up.
 - (3) The same reprimand of punishment for the same offense committed by the same child will soon prove ineffective, hence be fertile in evils.
 - (4) Have reserve power, not exhausting the final resources in the first move.

The last few points may be illustrated by a discussion of a very common breach of order—whispering. Perhaps the teacher first suggests that, though it isn't wrong in itself, whispering interferes with good work and consequently should not prevail in school. The majority of the pupils will succeed in not whispering, but some cannot. The teacher may now discuss just how whispering interferes with good work—how the whisperer doesn't study; how the one to whom he whispers is unfairly interrupted; how those nearby, who hear the confusion, are disturbed; how the teacher may hear the noise and have to give only partial attention to the class he is teaching until he locates and stops the disorder; and consequently how the pupils in that class receive less than their fair share of attention or good instruction. If the teacher is obliged to go to the whisperer or to reprimand him aloud, every one is disturbed. Having thus helped pupils to see how far-reaching a little lack of self-control may be in its consequences, the teacher may urge that all help those who forget by shaking their heads and refusing to reply.

Should this not be effective, the teacher may say, Since some of you do not take your share of responsibility in keeping our room a quiet place for study, let me say to you that you *must* refrain from whispering. I'll help you all I can by giving you plenty of work to do, and by a warning nod when I am not too busy; but in the main you must look out for yourselves, and you *must not whisper any more*.

Then comes the test of whether the teacher means what he says. A child whispers. The teacher must not ignore it on the plea that he knows "the child forgot," or that it was "only one child," or that it was so "quietly done that few were disturbed." The punishment, sympathetically administered, must be swift and sure. The offender is called to stand by the teacher, to sit in another seat, or is publicly named as an offender, or has his name put on the board as one who "forgets," or is told to forfeit his recess, depending, of course, on the age of the child and the means that will best fit him. For a second- or third-grade child, to stand by the teacher will be enough. The next offense may be punished by the child's having to sit in a smaller seat, as if he were still too little to remember. The next time, by changing his seat so that he isn't tempted to talk to the particular friend involved. The next time the teacher keeps him for a private talk and lets him lay on his desk for the day, a card that has on it a picture suggesting silence; for example: (a) Mother saying "Sh" because baby is going to sleep; or (b) Mother with finger on lips as she points to baby already asleep; or (c) a card that says, "I can keep from whispering, and I will!" or (d) that says "Remember"; or (e) just "Silence!" These cards should be treated as helps; but if they, too, are ineffective, the teacher will do well to make a record of how much help the child has needed, or how many days or weeks elapse before he can remember. Some children would be helped by having such a record made public—as, for example, on the blackboard write, *These children are trying not to whisper. The marks indicate the days they have needed help from others!*

John Brown, / / /

Jennie Sims, / / / / / /

But some children would simply revel in this publicity, and the plan would be no deterrent at all. In that case the record must be kept in the teacher's note-book, for just the child and teacher to discuss at the end of each week and to mark the child's gain in self control. The opposite plan of having a list of *children who can take care of themselves* on the board, with the names of delinquents "conspicuous by their absence," is sometimes valuable.

Other good helps to be used are (a) to send an inveterate whisperer with his book to study in a room where the pupils are known to be especially quiet and studious; this may be to a lower

grade to shame the whisperer by seeing how smaller pupils do better than he, or to an upper grade to see what is expected of him later and how he should begin at once to learn control. The form of punishment must, of course, fit the mental attitude of the offender. (b) To give the child a seat, for several days, at a table in the front of the room so that he sees nothing that is going on behind him, and so has no temptation to whisper. (c) To have the child make up the time he has lost for himself and others by working after school. (d) To deny the child some coveted part in explaining an exhibit, because he hasn't helped all he could to make the work easier for others in the room.

The teacher who really means what he says will find still other ways to help individual children. Though no schoolroom can be absolutely free from whispering, and though whispering is not a crime (like cheating or story-telling or stealing) and consequently should not be punished like a crime, the teacher should uphold the ideal of *no communication during study times*. Plenty of worth-while work to keep all busy is the primary preventive of communication. Chances during recitations for the children to express themselves freely because sure of sympathetic treatment from the teacher is a second fundamental, since pupils who have "said their say" and have interesting tasks to do, will labor industriously and independently at the work. A few minutes, at more or less frequent intervals, depending on the grade, given to free movement and conversation, will also be found a help in some schools.

2. Next, develop conscience; that is, give pupils sufficient opportunity in exercising judgment about what to do, and in seeing the good or poor result of their conduct, to help them gradually to create their own standards, no longer needing to depend on the teacher's approval to know whether they have done right or not.
3. Then help pupils grow in will power, hence give chances to exercise initiative, to choose a line of action in a wholly new situation. If the teacher anticipates every situation and forestalls any exercise of judgment and "will," pupils do not grow.

A first-grade teacher who had a daily three-minute rest period during which the pupils indulged in free movement about the room and in chatting with one another, gave the usual signal for relaxation on the first spring day that windows were wide open. In less than a minute all had followed the lead of two or three and were clambering over one another, four or five deep, to lean out of the windows. The teacher had at once to call all to their seats, discuss the danger of falling out of windows so high from the ground, of torn or mussed clothing from so much jostling, as well as the confusion and impoliteness shown. She further said: "Now, some one can't be always with you to say 'do' or 'do not' do thus and so; you have to learn to think for yourselves. Because you didn't do so this morning, we've had to take even more than the time of your rest period in talking about it; so much time, in fact, that instead of the long story I had planned to tell you we have time for only a very short one." No one leaned out of a window the next day.

4. Lastly, help pupils to broaden their ideas of right, to discriminate between "letter" and "spirit" of the law and so recognize (a) that an act in itself may not be wrong, but is wrong in some places (when others are disturbed, or when a law is violated, or when one fails to do his own work); and (b) that a changed form of the act is just as wrong as the form denied (note-writing instead of whispering, for example).

B. *Recognize the factors which help a pupil to form and to change his standards of behavior*—heredity, material environment, conduct of others, and the child's own conduct. The first is past the teacher's power to change; the second can be changed very little by any one teacher; the third and fourth are the agencies which the teacher may mold. He must, himself, be honest, prompt, respectful to others, reliable, and generous; he must choose companions of high character; he must suggest only persons worthy of imitation as ideals for pupils to follow; he must secure good conduct in the schoolroom, first, that the weak ones may follow what others do, and, second, because one's own conduct influences one's morals: he who does wrong loses self-respect and does more wrong; he who is held to doing right feels a glow of satisfaction that makes doing right the easy thing to continue.

C. Study the causes of poor discipline in yourself and others and profit by the discoveries.

1. Have high ideals of orderliness in the room. Of conduct. Of work.
 - a. Be a good housekeeper—keep things dusted; put away pictures or decorations for some special occasion as soon as their purpose has been served. Keep things fresh and up to date, and help the children to be orderly in getting and replacing material, in destroying waste paper, in keeping desks in order, and in assisting in passing materials.
 - b. Be sensitive to unnecessary noises, confusion, and movement, and quietly but firmly demand respectful obedience to right standards. Children like a teacher who is business-like, self-possessed, and pleasant, but who stands for his own rights; they choose for a playground leader one who demands that they play the game fairly. Children like to be made to do right.
 - c. Plan assignments so that pupils need not interrupt the teacher nor communicate with their companions while the teacher hears another class.
 - d. Have orderly movements to and from classes, the wardrobe, etc., with as few directions as possible.
 - e. Inculcate courteous habits. In adult life, we have to learn to await another's convenience; to take our turn to speak; to knock at a door; and in other ways gain permission to usurp another's time or attention. A habit of thoughtfulness of others can be started in school; one means is by insisting that pupils gain permission to speak, to leave their seats, etc.; another is by having pupils stand in good position to recite or when addressing the teacher or a visitor.
 - f. Hold children to doing faithful work. Recognize and prevent repetition of carelessness, shirking, and dawdling.
2. Make punishment impersonal. Few misdemeanors are committed as personal affronts, so the teacher need not take them as such. Work must be done, not merely because the teacher said so, though that is a good lesson to learn at times, but because the child's business in life is to get his lessons, and because parents support schools and send children there that they may learn to work. The teacher must see that the work is done, but the child who fails to do his work has not offended the teacher; he has failed in higher things—in trustworthiness, in exactness, in holding himself to a hard task, in honesty.
3. Cultivate a personality that makes you:
 - a. Sympathetic but not indulgent. b. Persevering and cheery in the face of difficulties. c. Self-reliant, yet open to advice. d. Able to keep school matters to yourself. e. Loyal to your superintendent, to your patrons, and to your pupils. f. Indefatigable in the preparation of lessons, in securing helpful material, and in trying to grow professionally. g. Use good common sense on all occasions.

D. Study the common forms of punishment and judge of their value in gradually securing from individuals right conduct as an expression of right attitude or character.

E. *Study children.* Note their changing attitude towards different forms of punishment with their increasing years, and try, at each need for punishment, (suggestion and direction being of no avail here,) to administer the right punishment in the right way to be effective in real character development.

XI.—A FEW ESPECIALLY IMPORTANT SCHOOL LAWS WHICH TEACHERS SHOULD NOTE.*

NOTE: The first figures refer to section numbers in the 1915 pamphlet summarizing *Laws of Minnesota Relating to the Public-School System*, prepared under the direction of State Superintendent Schulz, by W. H. Williams. A copy of this should be in the library of every schoolhouse in Minnesota until it is replaced by a revision of the same. The numbers in parentheses are those used in the General Statutes, hence any law can be quickly found even in a revision of this 1915 summary.

§ 147 (2796). In this section, the word "five" before months should be "six." Compare this with § 181, in which the law says that the minimum school year is six months.

§ 148 (9412-16). School should *not* be held on any legal holiday. Some teachers do hold school on a legal holiday so that they may take some more convenient date for a vacation. The legal holidays are selected as special occasions for showing respect and patriotism, and children should be instructed in the reason for so doing. To disregard the law, letting any day be substituted for the legal holiday, as though it were merely a day's time given to teacher and pupils, depreciates the love of country and of God which these holy-days were meant to foster.

§ 150 (2835). Note that instruction in *morals* must *not* be *religious* teaching.

§ 173 (8634). Corporal punishment must be reasonable and moderate and exercised only for the good of the child.

§§ 181-185 (2895-2899 as amended in 1915). Teachers should read these sections and make sure that they do their part to have schools receive their just proportion of state and county funds. Teachers must prevent parents and children from misconstruing the phrase, "forty days of attendance." This does *not* mean that pupils shall attend school only forty days. Besides the required forty days' attendance of a pupil, simply demanded that the district may be entitled to some apportionment of funds, the child must continue in school for the full term of school, as shown in §§ 225-231.

§ 189 (Laws of 1915). The Department of Education issues a blank *Application for State Aid to Class "A" Rural Schools* which contains the rules pertaining to such a school's equipment. A teacher may secure such a blank from the county superintendent or from the State Department of Education, St. Paul. The teacher should shoulder his full share of responsibility in keeping up such equipment, including the notifying of the school-board of needed repairs or supplies.

§§ 225-231 (2979-2985). A teacher needs to know the exact law regarding compulsory education, noting especially his own duty in holding children, parents, and school-board if necessary, to obedience to the law. The teacher should not wait several days before finding out the cause of a child's absence. If no member of his family nor any neighbor's child can properly account for the absence, the teacher should *at once* telephone, write, or, best of all, visit the family. He should then take all steps provided by law.

* Thanks for help on this section are due County Superintendent A. C. Loomis, Winona.

§§ 288-290 (2829, 2830-2864). Teachers should be thoroughly conversant with the law concerning their qualifications.

§ 295 (2966). Note the Smith decision, Feb. 15, 1915, regarding pay for time spent in Institutes, and read in this connection § 271 (1020).

§ 299 (2838). Teachers should know in what branches they are expected to pass examinations if by this means they secure certificates.

§ 325 (2832). Note the whole section, but especially the paragraphs concerning contracts on p. 89 of report used. Although a person's word is morally as good as his bond, the law recognizes only a written contract, so teachers need to secure such an instrument before counting themselves legally employed.

Teachers are urged themselves to be ruled by the ethics rather than the law of the situation, *asking leave* to change (if they desire to) whether they have given an oral or a written acceptance. If such resignation is refused, a teacher should cheerfully abide by the decision, feeling that his oral acceptance obligated him to remain unless willingly released.

§§ 326-327 (2833-34). Teachers must make it their conscientious business to learn how to keep a register correctly and to make accurate reports.

§§ 332-347 (Laws of 1915). Teachers should know at least what concerns them individually about the state teacher's insurance and retirement fund. The secretary of the board of trustees of the pension fund, The Capitol, St. Paul, will supply necessary blanks and circulars of information, if these cannot be secured from county superintendents.

XII.—A TEACHER'S BOOKS.

Because teachers of experience, principals, and supervisors, receive numerous requests from young teachers concerning "the best books to own," "what I ought to read to grow more," "how I can understand children," "what book is best for help in teaching history" (or some other named subject), "what material is available for school entertainments," "what reference-books the children ought to read for geography or history," "how to secure parent coöperation," and the dozen and one other problems which assail a teacher, it seemed very proper to include in this Manual a list of books which might help comparatively inexperienced teachers. (Teachers longer in service know the many means of keeping up with what they need, hence are not specifically provided for here.) Any one who has attempted to make a similar list will realize how unsatisfactory the result is felt to be, for, almost before the printer's ink is dry, some new and possibly better publication will be available. Also any one compiler is certain to have a limited range; consequently, the lists offered are to be used merely as a working basis and are necessarily tentative.

A.—GENERAL REFERENCES TO SECURE.

1. Minnesota School Library List for 1915-16. (A copy should be found in every school-house in the state, or secured from Miss Wilson, Department of Education, The Capitol, St. Paul.) Refer constantly to the introduction for general helps about books; pp. 1 to 90 for books liked by children, for the books to have as desk copies in every subject, for reference-books to be consulted by pupils; pp. 90 to 96 for the teacher's own books. The list is discriminatingly selected and is up to date. Books here mentioned will *not* be repeated in the following list.

2. Books to Read Aloud: Miss Wilson. (Same address as above.)

3. Material Descriptive of Minnesota Secured at Little Cost. Public library, St. Paul. (Enclose stamp.)

4. Catalogs of The Northwestern School Supply Company, Minneapolis; the St. Paul Book & Stationery Co., St. Paul; the Milton Bradley Co., through Thomas Charles Co., Chicago; A. Flanagan, Chicago; and book lists from all good book firms, including special series such as the Riverside Educational Monographs, and the Riverside Text-Books in Education.

5. Bulletins issued by the State Department of Education and the University of Minnesota which apply to any phase of a teacher's work.

6. U. S. Bureau of Education Bulletins—often free—seldom over 10c each. a. Teaching Material in Government Publications, No. 558, 10c. Especially valuable as source for other material; for example, Fifty Common Birds pictured and described, 15c; Games, Songs, Marches, etc., for Indian Schools, (but excellent for *all* schools,) 10c; Contagious Diseases and how to recognize seven of them, 5c. b. A Teacher's Professional Library, No. 408. c. The Reorganized School Playground, Curtis, 10c. (No. 40 of 1913 issue.) d. The Teaching of Community Civics, Barnard, No. 650, 10c.

7. Annual reports of the Minnesota Educational Association and of the National Education Association are valuable to show the trend of professional interests and outlook. (The superintendent, or the school as a whole, should have a copy.)

8. A comparative Study of the Public-School Systems in Forty-five States. Pamphlet No. 124, Russell Sage Foundation, 10c.

9. Monthly copies of *School Education*. (Last year's work by Miss Avis Wescott was especially valuable for beginning and primary teachers.)

B.—BOOKS TO SUPPLEMENT THE MINNESOTA SCHOOL LIBRARY LIST.

NOTE: Topics and pages refer to Miss Wilson's Minnesota School Library List.

Ethics, p. 8.—Palmer—Ethical and Moral Instruction in the Schools. Cabot and others—A Course in Citizenship.

Government, p. 11.—Dunn—The Community and the Citizen. Cabot and others—A Course in Citizenship. Field and Nearing—Community Civics.

Vocational Guidance, p. 27.—Parsons—Choosing a Vocation. (Illustrates methods of advising young people. Is a fine companion to Davis, which excels in bibliographies and in suggestions for using the composition period for vocational guidance.)

Collins Publicity Service, Philadelphia. (Excellent "Teachers' Auxiliaries" issued on the different vocations.)

Thrift Service Co., Rockford, Ill. (Issues many booklets that would inspire children to build character—especially Johnson's story in "Thrift Talk" issued by a Milwaukee bank.)

Household Economics, and *Manual Training*.—pp. 30 and 31—Shelland—Bulletin No. 42, and a forthcoming Bulletin, State Department of Education, St. Paul.

Drawing, p. 33.—(Ref.) Sargent and others—Course of Study in drawing in *The Elementary School Journal*, April, May, June, 1916, and on into the fall, 1916. (Ref.) Bailey—Art Education. (Ref.) Daniels—School Drawing a Real Correlation.

Games, p. 35.—Boston Normal School of Gymnastics—One Hundred Fifty Gymnastic Games. Crawford—Dramatic Games and Dances for Little Children. Crawford and Fogg—The Rhythms of Childhood. Johnson—Education by Play and Games. Newton—Graded Games and Rhythmic Exercises for Primary Schools. Gomane—Children's Singing Games. Department of Interior—Indian Affairs—Social plays, games, marches.

Dialogues and Plays, p. 37.—Chubb—Festivals and Plays in School and Elsewhere. Andrews—The Perfect Tribute. (Excellent for dramatization.) Antin—The Promised Land. (Also makes a fine patriotic play.) Ethical Culture School (New York)—America the Wonderland. (A Patriotic Festival.) Freeman—The Green Door. (Makes a fine Thanksgiving play.) Goodlander—Fairy Plays for Children. Stockton—School Assemblies; Winona Normal School Bulletin. The Road House to Ardennes (Shakespeare comes into the play). The Toy Shop. (Makes a fine Christmas play. Children act the parts of toys. Whenever a customer comes in, they are decorous. When the shopkeeper leaves with a customer, the toys dance, and make merry, each being consistent.) Van Dyke—Several of his stories prove excellent for dramatization by upper-grade pupils.

Music, p. 34, (Reference-books only.) Faulkner—What We Hear in Music. Damrosch—Some Essentials in the Teaching of Music. Cady—Outlines of Music Education. Henderson—What is Good Music. Krehbiel—Appreciation of Music. Mason—The Orchestral Instruments and What They Do. Smith, C. V.—1916 Bulletin Winona Normal School.

Teachers' Books—Education, p. 90. Ayres—Laggards in Our Schools. Butler—The Meaning of Education. Clodd—The Childhood of the World. Fisher—Mothers and Children. Henderson—Education and the Larger Life. King—Rational Living. Kirkpatrick—Fundamentals of Child Study. Klapper—Principles of Educational Practice. McMurry—Elementary-School Standards. Spencer—Education. Huntington—Unconscious Tuition.

School Hygiene, p. 91.—Bailey—Sure Pop and the Safety Scouts. Shelland—Bulletin No. 42, and a forthcoming Bulletin issued by the State Department of Education, St. Paul. Trenton, N. J., Department of Public Instruction—Teaching of Hygiene and Safety.

Story Telling and Collections, pp. 91-92.—Chisholm—The Golden Staircase. Huckel—The Wagner Opera Stories Retold (each story in a separate volume; beautifully told).

- Arithmetic*, p. 93.—(For teachers only.)—Belfield and Brooks—The Rational Elementary Arithmetic (contains excellent suggestions for ratio work applied to the denominate-number tables). Hall—The Arithmetic Primer (preface only; excellent suggestions for incidental number work). Speer—Primary Book for Teachers (old, but excellent for ratio suggestions). Waldo-Harris—First Journeys in Numberland (very suggestive to the teacher in the lines of games and seat-work). Suzzalo—The Teaching of Primary Arithmetic. Deming—Number Stories. Madden and Turner—Rural Arithmetic. Hoyt & Peet—Everyday Arithmetic.
- Language*, p. 93.—Klapper—The Teaching of English. Manly and Powell—A Manual for Writers.—Deming—Language Games for all Grades. King—Language Games. Maxwell, Johnston, and Barnum—Speaking and Writing.
- Geography and History*, p. 94.—Booth—Material on Geography which may be obtained free or at small cost (10c), American Library Association, Chicago. Harvest Scenes of the World—International Harvester Co. McMurry—Excursions and Lessons in Home Geography. Andrews—The Counsel Assigned (another story of Lincoln). Committee of Eight Report to the American Historical Association—The Study of History in Elementary Schools (full bibliography). Department of the Interior—General Land Office (1908), Public Documents; Map of the United States of America, showing routes of Principal Explorers; House of Representatives (probably 10c). Dickson—New American History for Grammar Schools (excellent chapter-end devices for teaching history). Hall—European Beginnings. Johnson—The Teaching of History. Langlois and Seignobos—Introduction to the Study of History.
- Reading*, p. 94.—Klapper—Teaching Children to Read. Clark—Interpretation of the Printed Page. Clark—How to Teach Reading in Public Schools (an older book, but not fully superseded by the first named.) Everts—Vocal Expression. For Phonics: Akin—Word Mastery. Libby—The Key Method. Robbins—Phonetics for Schools. Wescott—The Teaching of Phonics.—The Teaching of Sight Words.
- Literature for Children*, p. 95. Bunce—Fairy Tales, their Origin and Meaning. MacClintock—Literature in the Elementary School. Moses—Children's Books and Reading (similar to Olcott's Children's Reading). American Library Economy—Course of Study for Normal-School Pupils in Literature for Children.
- Understanding Children*.—Andersen, Hans Christian—The Story of My Life. Brubaker—Stories of boyhood in several numbers of *Harper's Magazine*, 1914-15. Graham—Dream Days. Graham—A Golden Age. Henderson—John Percyfield. Holland—Arthur Bonnicastle. Howells and Alden—The Heart of Childhood. Lynn—A Stepdaughter of the Prairie. Morris, Clara—Little Jim Crow, and Other Stories. Stevenson—*Virginibus Puerisque*.

C.—THE FIRST TWENTY-FIVE BOOKS FOR A TEACHER TO OWN.

(Order not significant.)

1. James—Briefer Course in Psychology, or any standard psychology.
2. Klapper—Principles of Educational Practice, or any standard pedagogy.
3. Kirkpatrick—Fundamentals of Child Study.
4. A medium-sized dictionary.
5. Manly and Powell—Manual for Writers, or an equally reliable "style-book" for composition.
- 6-9. One good method-book in each of several subjects, as needed: Arithmetic. Drawing. English—Reading, phonics, language, literature, story-telling. Ethics. Geography. History. Industrial work—General, cookery, sewing, basketry, wood-work. Music. Nature-study. Physical education—Physiology, Hygiene, Safety First. See Minnesota School Library List and the supplementary list just preceding this.
10. McMurry—How to Study, and Teaching Children to Study.
11. One good book on discipline.
12. a. For primary teachers—a good book on seat-work.
b. For upper-grade teachers—a good book on vocational guidance.
13. One book on children's reading: Olcott, Moses, or MacClintock.
- 14-15. Two or three books on understanding children.
16. One book for use in giving entertainments.
- 17-18. Two or more volumes of poetry, including at least one old-time classic (Homer, Dante, Milton, Shakespeare).
- 19-20. Two or more volumes of essays (Emerson, Stevenson, Crothers—The Gentle Reader, for example).
- 21-23. Two or three standard novels to which the teacher can return over and over again, always finding new interpretations of life. (Dickens, George Eliot, Oliver Goldsmith, Margaret Deland, C. Hanford Henderson, David Grayson, F. Hopkinson Smith, etc., to suit the reader's taste.)
24. Pamphlets useful in teaching, to the extent of one dollar and a half—the price of a good book.
25. One good magazine (two to three dollars) for keeping up with the times.

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